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# ORIGINAL DEPARTMENT.

## LECTURE.

### SANITARY IGNORANCE AMONG HIGH AND LOW.

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I said some time ago, perhaps you already think a very long time ago, that the neglect of this body which is entrusted to our care, was chiefly shown in our neglect to properly nurture it, and I have been insisting that a most important part of its nourishment is the oxygen which the atmosphere supplies; but air alone would be meager diet for even the most spiritual of earthly shapes. That may be prime minister, but the butcher, the baker, the grocer and the milkman, are very important members of the kitchen cabinet; and upon the plentiful supplies they severally provide will our physical welfare greatly depend. It was a grievous sanitary mistake which announced as a precept that one should leave the table with hunger unappeased. Apart from the actual torture of such a thrice daily practice of self-denial, it is to be denounced on sound hygienic grounds. The human laboratory prepares some twenty-five or more pounds of products of secreting organs every day, a very large proportion of which is gastric juice. Reflect what an amount of solvent is here waiting for material to be dissolved. No wonder the stomach is a ravenous cormorant, only to be quieted by being fed. There is really little danger that more than is required to supply the actual waste, which amounts, in solid, liquid and gaseous matters, to at least six pounds a day, will be assimilated. The rest will be rejected. Huxley's tables fix the normal weight of a full-grown man at 154 pounds, of which 68 pounds are flesh, 24 pounds bone, 28 pounds fat, 10 pounds skin, 3 pounds brain, 3 pounds heart and lungs, 11 pounds abdominal organs, and 7 pounds blood, to maintain which he requires a minimum per diem supply of 5,000 grains of beef, 6,000 of bread, 7,000 of milk, 3,000 of potatoes, 600 of butter, and 22,900 of water—a total of about six pounds, corresponding to his daily waste. It is futile, however, to attempt to measure in precise numbers the quantities of carbon, oxygen, hydrogen and nitrogen—of albuminous, saccharine and oleaginous food each man, woman and child absolutely requires. Idiosyncrasy, temperament, age, bodily condition, emotional influences, employment, climate, weather, raise and lower the scale in rapid, incessant fluctuation beyond the possibility of human calculation. It is better to err on the side of surfeit than that of deprivation. How many children are sent to bed gnawed by hunger, because their over-wise parents have denied them the piece of bread or the bowl of milk they craved, and should have had. The house-dog and kitchen-cat sleep contentedly with well-filled stomachs, while the poor starveling tosses in its perhaps luxurious couch, crying, if not cowed by punishment, in obedience to nature's imperious demands. I do not doubt that many a dutiful child often practices unnoticed a heroic resignation that is Spartan in its

severity, when it quietly acquiesces in its mother's declaration that it has had enough, or its finical father portions out just what he thinks it ought to eat. It was once the barbarous custom to deny the drop of water to the parched lips and cracked tongue of the fever patient. Even to-day, the child who has romped till fluid streams from every pore, and its blood is all athirst, is told it must not drink lest it be made sick. Beside the unwise precaution that is harmful, sur-indulgence becomes venial if the food be good, the water clean, and the air pure. The beasts of the field browse at will, and the flowers drink in the dew which falls upon them without stint, but the human creature uses his reason to run counter to his natural animal instincts. The rich, effeminated by luxury, with stomachs as feeble as their limbs, seek to invigorate them by drugs, when good blood is the tonic they require. The poor spend their scanty incomes for dress and sham display, and stint themselves in food. There is no sadder sight than the gaunt, wan faces of the underfed women and children one encounters daily in the streets of a great city. To a physician, especially, their meager, starved bodies are mute appeals to his sympathy. They come to him for relief for aches and ailments that are only symptoms of inanition. Medicines cannot give them the bright red blood, the fat and muscle that are needed to round their limbs, fill up the hollows of their faces, and smooth out their wrinkled skins. Food is the one prescription that will make them well again. Bread and butter and meat are workers of wonders that iron, quinine and even opium, never can perform. There are crumbs enough swept from Christian tables to feed the multitude, and it were well if the Moslem's reproof, when he picked up the discarded crust—"Friend, that would have made a poor man's meal"—were oftener heeded. A pittance of unwholesome viands, bought because cheap, serves to dull the appetite, and the jaded bodies, which must work, are stimulated by insipid teas. Even the fragile flowers of fashion, who fancy that their morning inappetence is the evidence of finer organization than the peasant's ravenous greed for sustenance, might learn from the latter that the robust health which needs no tinting comes from a sound digestion. The man or woman silly enough to boast that they can not eat an early meal, and affect to breakfast at one o'clock, should know that they are already sick, and are in so far inferior to other men and women.

Across the border in Montreal and Quebec there is a race of women healthful, vivacious, vigorous, whose cheeks wear such a pronounced red that would here subject them to suspicion. Their superabundant health and spirits, their firm round limbs, which never lag nor stagger, their full chests, which never gasp for breath, are due first to their active out-door lives, and secondly to the keen zest for food which the pure air they breathe gives them. The injunction to eat, drink and be merry, no more palliates gluttony and intemperance, than are these sins against common sense arguments for affected squeamishness or total abstinence. The infant in arms finds its limit in the running over of the measure of its solitary article of diet; the most voracious child seldom gorges but once with too much sweets; and the healthy appetite unerringly indicates to the reasoning individual when he has well dined. Our higher civilization has no reason to be proud of the development of the modern American hotel-table and its daily parade of a multitude of little plates of soup, fish, flesh, fowl, canned vegetables, puddings, pies, ice-cream, nuts, fruit, and what not else—nor in the elaborate menu of a fashionable dinner with a dozen or more courses and eight or nine wines, intended to show how much money the host is able to throw away. The piled-up trays of what even the most omnivorous has to refuse carried away by the hotel waiters, not only suggest the pot-pourri, which has been extemporized in the stomach, but have a sanitary bearing apart from their relation to the question of the economics of food. The swill-pail of an ordinary household and the huge garbage-tubs of large establishments are not only reproachful evidences of waste, but add to the difficulties and expense of civic sanitation. The densely-populated communities of the eastern hemisphere not only utilize everything that is edible, but pay back the excremental refuse to the soil, that it may aid to germinate new food to make men live. We hide it from sight only that it may germinate the filth diseases that make men die.

But we may have only pure air to breathe and good food to eat, and still one other thing is needed to insure that sound health which leads to success in any pursuit, to the enjoyment of happiness, the capacity for pleasure, the attainment of long life, and its consummation in contented old age. This human mechanism must not be idle. When Simon Cameron was asked to what he attributed his remarkable vigor, he

said: "The secret of life is to keep moving. Men grow old only when they sit down long enough to get rusty." Salutary exercise does not consist in mere forced distasteful muscular activity, as where a daily task of walking over so many miles of street or swinging an Indian club so many times around one's head every morning, is self-inflicted and submitted to with grim fortitude. The mental discomfiture is quite sufficient to antagonize any other gain. It is the rational temperate activity of every organ which is beneficial, giving them all—limbs, brain and senses—that healthful play which is necessary for their proper nutrition and development, and which enables them to perform their functions in the best possible manner. To walk till the legs ache becomes fatigue, which is exhaustion. To pull in a race-boat may give one brawny arms, but swollen muscles do not make the man. Sur-excitation of any part is as harmful as its prolonged inactivity. My own experience of the athletæ of the Naval Academy is that they succumbed sooner than others, especially on ceasing their gymnastic routine. The violent exercise of the ball-room is extremely pernicious, being performed in a vitiated atmosphere, when an essential of all vigorous muscular activity is that it should be undertaken in the open air, the effect of dancing being to increase the ordinary vitiation of the air at least one-third. It needs no sanitary critic's eye to read in the faces of the jaded women in an ordinary ball-room after midnight, the inevitable signs of the unnatural excitement of physical intemperance, akin to the delirium of drink. The flushed faces or the pallor of those with weakened hearts, are as tell-tale of wrongdoing as the red eyes and bloated visage of the toper. If the one degrades and disfigures manhood, the other as effectually mars the woman. The panting, perspiring, bedraggled objects, which one sees in the small hours of the morning, with pupils dilated and dark rims around their eyes, showing their exhaustion, forced to effort by beef-tea or punch, or that latent evolution of the scent-bottle into a huge porte-génièvre—these are not visions of loveliness, nor are their rumpled companions of the other sex models of manhood. Unfortunately we do not see ourselves as others see us, and consequently what I say will probably not deter a single pretty woman who listens to me from dimming the brightness of her own eyes and the ruddy tints of her own complexion in the same vile atmosphere. We may picture the skeleton figure of death hovering unseen over the fair and fragile dancer, but the waltz will still go on to the monotonous grinding of the music and the vibrating cadence of the very floors and walls.

But what better are you, fathers and mothers? Do you pay any greater heed to the admonitions of your sanitary teachers than these giddy girls and boys, who fancy they are enjoying pleasure in wearing out their capacity for pleasure? Do you ever give an earnest thought to the prevention of disease? Do you not wait until some sharp twinge of pain, some qualm of nausea, scares you, or the changed aspect of the loved face alarms you, and then, with abounding faith, do you not rush to your pellets and dilutions, if you be good homœopaths, or to your family physician, or possibly, if you dread his fee, to the corner apothecary, who will give you his advice gratis, though he charge you twenty-five cents an ounce for aqua pura? How many men and women are there in this community, boasting as large a proportion of educated, cultured and eminent members as any other in the world—how many of these intelligent citizens look upon the physician as the pilot to guide them over treacherous shoals? Are they not already stranded and wrecked when they appeal to him for aid? Is medicine to them the science which unfolds the mysteries of human existence and the laws which govern it, or only an art by which their broken bones and battered and worn-out organs may be tinkered into soundness, and "their sweet bells jangled out of tune," made to play again in harmony. Undoubtedly a sense of gratitude sometimes invests the medical man, whose offices have snatched a loved life from death, with exaggerated attributes; but more often he is only summoned in the same spirit as some other tradesman, whose services are required to mend a leaking pipe or broken drain. Ignorance of the sanitary relations and functions of the practitioner of medicine, as the most important and responsible offices of his profession, can be charged against nine-tenths of every community. In the estimation of both high and low, he is only a medicine-man; and though it is a simple matter of arithmetic to prove that the ounce of prevention costs less than the pound of cure, yet to-day, as it was yesterday, and will be to-morrow, health boards and health officials vainly appeal for the dollars, be they few or many, required to equip them with the necessary means for stamping out the first spark of disease. When the fire blazes, which ought never

to have been lighted, they are lavish enough with the means of which till then they were so niggard; and are loud in their praise of the clattering engines and noisy patrol. Even the conflagration commands their admiration. I had occasion, as President of the American Public Health Association at St. Louis, last October, to present some statistics in illustration of the arithmetic of sanitary foresight, but my time nor your patience will not permit me to repeat them. It is worth your while, however, to look in your city ledgers upon these accounts, where on the one side is entered in paltry hundreds the money appropriated for health protection, and on the other a colossal balance of loss written in millions. Suffice it to say that the small-pox epidemic of Philadelphia of 1870–72, cost that city nearly twenty-five million dollars, which might have been saved, says Dr. Benjamin Lee, by "an additional expenditure by the city authorities of about twenty thousand dollars for purposes of prevention, made sufficiently in advance and with such publicity as to make the public fully aware of the impending danger." Small-pox invaded seventy-seven of the one hundred and two counties of the State of Illinois during its epidemic prevalence (1880–82), causing nearly three thousand deaths, and involving a cost of nearly four and a half million dollars, exclusive of the value of lives lost and disabled. "Within twenty days," says Dr. Rauch, "after the various agencies set in operation by the board had fairly begun to act, there was a decline of nearly fifty per cent. in the number of cases, implying a saving of two and three-quarter million dollars." Sir James Paget estimates the loss in England and Wales every year in consequence of sickness at twenty million weeks' work, that is as much work as twenty million healthy people would have done in one week; which is one-fortieth of the entire work done in a year by the whole population between fifteen and sixty-five years old.

(*To be continued.*)

## COMMUNICATIONS.

### THE EPIDEMIC OF TYPHOID FEVER AT PLYMOUTH, PA.

BY JOSHUA L. MINER, A. M., M. D.,
Of Wilkes-Barre, Pa.

The borough of Plymouth is situated on the North Branch of the Susquehanna River, in Luzerne county, Pa., about three miles below the city of Wilkes-Barre. The population is made up chiefly of foreigners of various nationalities, engaged in mining coal, and numbers about nine thousand. Many of the private houses and stores, the churches and public buildings in general, are substantial brick structures of varied architectural design, denoting a degree of intelligence, enterprise, and prosperity, not hitherto suggested by reports of the borough since the epidemic commenced.

The town is, for the most part, regularly laid out, the general direction of Main street being parallel to the general direction of the river. The other streets are nearly all of them either parallel with or at right angles to Main street.

Back of Plymouth, rising several hundred feet, is a range of mountains, which form the western boundary of the Wyoming valley. The base of this range runs through the borough, and is nowhere more than three hundred feet from Main street; so that a very large portion of Plymouth lies on the slope of these mountains. The borough line, however, does not extend more than one-third of the distance to the top.

Through the borough flow three streams of water—one through the southern portion, the second through the central, and the third near the northern boundary. Originally these streams were supplied with pure mountain water, but subsequently mine water from various collieries was pumped into them, thus not only very materially increasing the supply, but also rendering it quite constant even in very dry periods. The chief constituents of mine water are carbonate and sulphate of lime; the latter mostly. In some cases, as much as seventy grains of calcium sulphate have been found in one gallon of mine water, and as much as thirty grains of the carbonate. In some mines of the anthracite region, free acids are found in large quantities. From one to two hundred grains have been found in one gallon of the water of some collieries. The yellow deposit is an oxide of iron, which is found in large proportions. The free acid mentioned above is sulphuric acid. Along these streams, the grass and other vegetation in contact with the water are entirely destroyed. Fishes and frogs are never found in them—thus showing how destructive they are to organic life, and consequently they may be considered more or less disinfectants.

There is no general system of sewerage in operation in the borough, although the facilities are unusually good.

Almost every lot is provided with a privy-vault,

and in many instances all sewage and waste-water passes by underground drains into them. In most cases, however, these vaults are not connected with the houses by drains, and are used entirely for the reception of excreta. There are many drains for conducting away waste-water, which open just outside the kitchen door, and extend either to vaults, to the gutters along the streets, or to remote portions of the lots. Among some of the poorer and more careless people, slops of all kinds are thrown anywhere on the ground around their houses, or emptied out on the street.

Ashes and garbage in general are variously disposed of. A few people make regular provision for their removal. Many have an ash-heap in a corner of their yards. Others carry their ashes and garbage out to the street.

It will be seen from the situation of the borough on a hillside and the course of the three streams of water through it, that whenever there is a heavy fall of rain for a few hours the borough is tolerably well washed. The general health of this borough has been equal to that of any other place in the county up to the tenth of last April; so that the present epidemic can in no way be attributed to the sanitary condition of the borough. Since the first of May the sanitary conditions have been greatly improved. Ashes and garbage have been removed, privy-vaults emptied and thoroughly disinfected, and a scientific system of general disinfection established.

The cause of the present epidemic was shrouded in mystery for a long time. Dr. R. Davis, of Wilkes-Barre, first suggested that it might be found in the water-supply. The public quickly took up the suggestion, and their clamor became so loud that the water company invited a committee of physicians from the city of Wilkes-Barre to thoroughly investigate their water courses and reservoirs, to examine the water supplied, and ferret out, if possible, the cause of the great scourge. The committee consisted of Drs. Murphy, Taylor, and myself. Every facility was offered to make the investigation thorough and impartial.

The borough receives its water-supply from three sources—individual wells, the river, and from the Plymouth Water Company. The wells and river, till a few years ago, alone supplied the water.

The Plymouth Water Company derives its supply from a beautiful stream, having its source in various springs on the mountains back of Plymouth. In the glen through which the stream tumbles, four dams have been constructed at various distances, making reservoirs of various capacities—the whole distance from the first reservoir to the fourth being about one and a half miles. Between the first reservoir and the second an artesian well has been driven to the depth of a thousand feet, with a capacity of one hundred and fifty gallons per minute. As the result of all this labor, the water supplied is abundant during a greater portion of the year—clear, cool, and perfectly pure. Besides supplying most of the water used for domestic purposes, several large collieries are supplied by the water company. This latter supply, when the mines are in full operation, amounts to about two or three hundred thousand gallons daily. When there is a drought of any length, the supply of water from the mountain stream is not sufficient to meet all these demands. To overcome this difficulty, the water company has supplied river water on several occasions.

The water is delivered from the first reservoir by a single pipe, which is continuous for several hundred feet. It then divides into two mains; one runs through the part of the borough on the hill, and sends branches through most of the streets; the other main continues down Coal street to Main street. On this main, near its junction with the first main, is a shut-off or stop-cock. This main supplies Main street, the collieries, and that portion of Plymouth lying between Main street and the river. It also connects through many streets opening into Main street with the branch-pipes from the main first mentioned. Wherever these connections exist, there are shut-offs or stop-cocks.

Whenever mountain water is low the stop-cocks are all turned, so that this water may not be distributed to the collieries, and necessarily Main street is shut off too, and instead these latter are supplied with river water. It will therefore so happen that a party living on Main street will be using river water, while a next-door neighbor around the corner towards the mountain is using the mountain water.

River water has been used as above by the Water Company for a period in almost every year since its organization. In 1881, the company pumped river water from August 30 to November 5, from November 21 to December 23. In 1882, from October 27 to January 1. In 1883, from September 30 to February 1, 1884. In 1884, from July 30 to November 24. In 1885, from March 20 to March 26. This last pumping has been held by many as the cause of the present epidemic.

The objection to river water is that it contains a large [amount of sewage from Wilkes-Barre. There are in Wilkes-Barre about six hundred houses whose sewage passes into the river. Of this number, very nearly half have passed their sewage in for the last ten years. Of the balance, a very few, if any at all, made connections with the sewage system of Wilkes-Barre between November 24, 1884, and March 20, 1885, so that the bulk of sewage passing from Wilkes-Barre into the river was not materially increased between those dates.

This epidemic could not have been caused by the use of well water, for in families using well water there is uniform immunity from it. On Temperance Hill, a portion of Plymouth, eleven families were found using well water, and not a single case of fever had occurred. On Lee street, all the families on the upper side use hydrant water, those on the lower side use well water. The latter are entirely free from the fever, while the former are almost all affected. On Davenport, Ackley, and Franklin streets, was found the same relative state of affairs. On Welsh Hill, another portion of Plymouth, hydrant water is not found at all, the water being entirely derived from wells. Here were found four patients sick with the fever. These four, however, were working out in town, and were taken sick there, and subsequently removed to their homes in this locality. Wherever, on the other hand, hydrant water is used, there the fever is found to prevail. This leads to the conclusion that in the hydrant water lies the cause. Was it the river water supplied between March 20 and 26, 1885?

If the period of incubation was a fixed one, that would be a strong factor in influencing the answer; but being a period varying from ten to twenty days, it helps little or nothing. Still, as Dr. Davis argued in a recent discussion of this epidemic before the Luzerne County Medical Society, in seven or eight hundred cases, some few at least ought to have developed as early as the tenth day from the reception of the poison. As a matter of fact, none occurred before the 9th of April, which would be more than ten days from either March 20th or 26th.

The following cases, most of which were collected by Dr. S. H. Taylor, will throw some light on the question. A family living about six hundred feet below the first reservoir, get their supply of water from the creek formed by the overflow of this reservoir, and at no time did they use river or hydrant water. In this family are two cases of the fever.

A lady coming from the West to Plymouth on March 29, was taken down with the fever about April 12. She drank no river water whatever.

A young man visited Plymouth from Dallas, on April 1, and drank freely of the hydrant water. About April 15 he was smitten with typhoid fever, and has been very ill.

A young lady from New Jersey attended a wedding in Plymouth on March 25. She made Wilkes-Barre her headquarters. On this day she went to Plymouth about 10 a. m., and returned about 3 p. m. During this time, it is positively asserted, she drank no hydrant water whatever. Subsequently, about the 28th or 29th of March, she went to Plymouth to visit there several days. Later she returned home to New Jersey, and about the 14th of April was taken down with a typical case of typhoid fever.

Many families removed to Plymouth from various places after April 1, and many of these are among the afflicted.

Other cases might be cited, but the above are sufficient to argue strongly against the river water in any way being the cause.

In the third place, a portion of Plymouth known as Broadway, and another near by as Ridge Row, comprising some sixty houses belonging to the Del. & Hud. Coal Co., were supplied all winter with river water, the supply being furnished by a system of water works owned and operated by the Del. & Hud. Co. On the 3d of April, when the ice broke up and moved out of the river, the pipe through which the water is drawn was disabled, and the pumping had to be stopped. Till then, these families, representing some three hundred individuals, freely used river water, and yet not a *single case* of fever has occurred among them.

Fourthly.—Nanticoke, a town three miles below Plymouth, is constantly supplied with river water. Yet typhoid fever is not epidemic there in the slightest degree.

Fifthly.—It is possible, although not certain, that between the 20th and 26th of March river water was pumped through *all* the water company's pipes. The superintendent states that while water is being pumped from the river, if the collieries drawing water from the water company are not working, it is possible to force water even up into the first reservoir. He says this did happen for two days between the dates mentioned.

The people who live in the highest part of Plymouth, and who are supplied with water through the main first described, state that they received no reliable supply of water from their hydrants

till after April first; that during most of the winter they could not get water from their hydrants, but got their water from their neighbors' wells. It is very doubtful if river water was used by them at all. Yet typhoid fever prevails among them with all the virulence that characterizes it elsewhere.

Thus it appears that the river water could not be reasonably considered THE CAUSE.

Whence is the cause? The committee previously mentioned found a house on the right bank of the mountain stream, some distance below the fourth reservoir, in which was a patient only then (May 6) convalescent from typhoid fever. This house is situated about forty feet from the stream on a bank sloping at an angle of forty-five degrees, and about fifteen feet high. This patient had been sick since January 2. His physicians more than once considered his case hopeless. His protracted illness was caused by a relapse that occurred March 12. On the 17th and 18th of March he had severe hemorrhages from the bowels. His attendants state that during the night of the 18th of March he passed, of "pure blood" alone, two chambersful. The nurses stated to Dr. Taylor and myself (there can be no doubt about this) that because of the cold weather, the snow, the darkness, and the distance to the privy, they were in the habit at night of taking the vessels containing the dejecta of this patient out the back door, which opens towards the creek, and going down and away from the house, towards the creek, and there emptying the vessels. They did so during the nights of March 17 and 18.

What is the result? These excreta were accumulating here night after night for many weeks. The ground was frozen hard for eighteen inches or two feet beneath. When the thaw occurred under the influence of the sun's rays, and the light rains that prevailed here during the last week of March, then all this accumulated poison was precipitated in two or three days, without the possibility of its being filtered by passing through the soil, into the stream below; and it is no act of the imagination to say that in one or two hours after the impregnation of the stream at this point, the poison was being delivered throughout Plymouth.

On account of the intense cold weather that prevailed during February and March, the mountain stream and its sources of supply were nearly frozen up. This condition, together with the reckless waste of water by opening hydrants at night to keep them from freezing, led to the scarcity of water that occurred during the middle of March, and also led to the necessity of pumping river water certainly for some, and possibly for all of Plymouth at this season of the year.

During the 26th of March, while the Superintendent was examining the water supply in the reservoirs, he discovered that the delivery-pipe in the bottom of the third dam was frozen, so that no water was being delivered to the reservoir below, and that the second reservoir was nearly full of water. He immediately built a fire around this pipe and thawed it out. The water immediately flowed into the first reservoir, two or three hundred feet distant, and was thence distributed to the borough. From this time on there was an abundant supply of mountain water, and the pumping of river water ceased.

Upon consulting the government daily weather record, kept by the Rev. Dr. Hodge, of Wilkes-Barre, it appears that the maximum, minimum and mean temperatures for the 20th of March and succeeding days was as follows:

| *Date.* | *Max.* | *Min.* | *Me.* | *Date.* | *Max.* | *Min.* | *Me* |
|---|---|---|---|---|---|---|---|
| 20 | 20° | 2° | 9.7° | 29 | 37.1° | 22.5° | 28.7° |
| 21 | 20.1° | —1° | 11.2° | 30 | 44.5° | 18° | 34.7° |
| 22 | 20.1° | 1.4° | 12.9° | 31 | 57.2° | 27° | 43.1° |
| 23 | 23.2° | 10° | 16.4° | Apr. 1 | 58.2° | 29° | 44.4° |
| 24 | 35.6° | 4° | 27.5° | 2 | 53.4° | 32° | 40.8° |
| 25 | 34.8° | 24° | 27° | 3 | 70° | 36° | 50.4° |
| 26 | 46.5° | 18.5° | 38° | 4 | 40.8° | 28.5° | 32.7° |
| 27 | 57° | 31° | 42.9° | 5 | 52.2° | 22° | 42.1° |
| 28 | 43° | 29° | 33.3° | | | | |

This record also shows that considerable rain and snow fell during this period, amounting in all to nearly 2″ of water. It is also to be stated that that portion of the land around the house above mentioned, where the excreta were thrown, has a southern exposure and inclination, thus being placed under the most favorable conditions for an early thaw. Making all due allowance for any difference of temperature caused by difference of altitude, only once after the 26th of March could the maximum temperature have fallen near to or below the freezing point. Moreover, from Dr. Hodge's record it will be seen that on that day, the 29th of March, 4½″ of snow fell, which melted made .28″ of water.

Allowing three or four days to pass from the time of thawing of the pipe mentioned above, during which this poison was passing into the stream, and then counting ten days, the period in April is reached when the first cases of the epidemic appeared, and counting fourteen or fifteen days, that period is reached when new cases by the hundred were daily announced.

Recognizing the filthy condition of the river, and the undesirableness of drinking such water, yet it must not be forgotten that the mountain stream for a given period was assuredly filthy, and

that too with the excreta of a typhoid fever patient. Again, if the cold would have a *deleterious* effect upon the excreta of this man, it would also be equally operative in the Susquehanna river as in this mountain stream.

The conclusion that the cause of this epidemic is to be traced to this case upon the mountain stream is irresistible.

The character of the epidemic was early diagnosed typhoid fever by some of the Plymouth physicians. The diagnosis was confirmed by Wilkes-Barre physicians called in consultation or in attending their own cases. This diagnosis was also asserted by the investigating committee mentioned before. It was indisputably confirmed by the post-mortems made by Drs. French and Shakespeare, of Philadelphia.

More than a thousand have been smitten with the disease, nearly a hundred have died, and more than two hundred families have been rendered destitute.

The lessons from this epidemic are numerous, and should not be lost. They have been presented at a fearful cost, and should be widely spread.

First.—No matter how clear, or cool, or pure, a stream of water may appear, it may contain an indetectible, but death-dealing germ. It is well known that a single bacillus, under favorable circumstances, will, in twenty-four hours, breed millions. This argues the great care that should be exercised by water companies to guard their streams against every possible source of infection. They should control the streams and their tributaries, together with the adjacent land sloping towards them.

The innocent but careless act of professional attendants may be the cause of most direful results.

The physician should inform himself in regard to the minutest detail of the care of his patient, both inside the house and outside, leaving nothing to the common sense of attendants.

Disinfection and all antiseptic measures should be promptly and vigorously used in all cases of contagious or infectious diseases, no matter how isolated they apparently may be.

The knowledge of disinfectants and antiseptics, together with their use, should be widely disseminated in a useful form, not only among the profession, but also the laity.

—M. Coestu, of Paris, reports two hundred and ninety-eight cases of diphtheria treated by large doses of calomel, and only twelve deaths.

## THE CAUSES OF PHTHISIS.

BY PROF. GERMAIN SEÉ,

Of Paris, France.

[Translated by E. P. Hurd, M. D., Newburyport, Mass.]

(*Concluded from page* 681.)

### WARM AND COLD ATMOSPHERES.

I. *Warm Countries.*—In warm countries phthisis is especially prevalent. In the time of Celsus and of Pliny it was unknown in Egypt; to-day it rages with great severity in Lower Egypt, not only among strangers, but also among the natives. At Cairo, till quite recently renowned for the advantages of its climate, it produces a mortality of fourteen per cent. In Hayti, it ravages the cities and spares the plateaus. Countries situated in the equatorial zone, says Pochard, offer the most favorable conditions for this disease, and sojourn in these places ought to be interdicted to phthisical patients.

II. *Cold Countries.*—In cold countries, such as Norway and Sweden, phthisis is rare in the northern and mountainous parts; but at Christiania, at Stockholm, and in the maritime portion, which is bathed by the Baltic and North Seas, as well as in the Russian seaport cities, situated on the shores of the Baltic, the disease is frequent. In Denmark, at least in Copenhagen, phthisis is accountable for thirteen per cent. of the mortality. It is always, and everywhere, the city which pays the largest tribute to the disease.

III. *Temperate Regions.*—The same holds in temperate climates. At Berlin, in Saxony, in the southern part of Germany, the disease is very frequent, at least in the cities. We know the mortality of Vienna, it is exactly the same as in Paris.

IV. *Glacial Countries.*—It is only in glacial countries, like Iceland, that phthisis has not thus far been observed. If this island has an immunity from the disease, it is because it has little communication with the civilized world outside.

V. *Importation of the Disease.*—The same observation applies to the coasts of South Africa. When the negroes have been transported from their native country, where phthisis is relatively unknown, to countries where this disease is prevalent, they have contracted it with extraordinary readiness, and have rapidly succumbed to its ravages.*

*We should not overlook the fact, especially pertinent in this connection, that there are other important factors besides the bacillus that have to do with the propagation and diffusion of phthisis. There are multitudes of individuals who have immunity from the disease however intimate

Hence, whatever may be the latitude of different countries, it is always in the centres of population that the disease rages with the most intensity; the countries or localities which have immunity from the disease have but few relations with the dense populations outside and the commercial world generally; when these relations are established and become extensive, the disease arrives and propagates itself.

VI. *Seasons.* Change of seasons exerts no influence except so far as it favors the development of the complications of the disease. The summer is as bad for the phthisical as the winter, but statistics show that the maximum of mortality, is in the spring by reason of the broncho-pulmonary maladies which are so frequent at this season of the year. At Paris, where 100 individuals die every day, the mortality is the greatest in March, April, and May. It is the least in August, July, and September. The prevailing inflammatory disorders are the cause of this difference.

§ 37. ATMOSPHERE OF ALTITUDES.

There is no doubt as to the relative protection and immunity afforded by altitudes. In this connection reference is generally made to the high plateaus of Mexico, which are almost if not completely exempt from tuberculosis. The endeavor has been made to explain this exemption by the rarification of the air and by the endemic and anoxæmic chloro-anæmia which is believed to be antagonistic to tuberculosis; the fact itself has, however, been controverted, and Jourdanet computes the mortality of Mexico from phthisis at 5 or 6 per cent.

Jaccoud, with rare perspicacity, has defended the doctrine of the immunity of altitudes, especially of the Rhetian Alps, the elevated valleys of the Engandine, and particularly Davos, which is 1755 metres above the level of the sea. St. Moritz and Pontrisina, more elevated still, are a a real refuge against the disease, and a hope for patients who are already victims. In calling attention to the benefits of these cold and elevated stations, Jaccoud has rendered a real service to science, and if for no other reason than that it has done much to put a check to those incessant migrations to warm or temperate regions which are often themselves more infected than the native country of the patients. But we should not exaggerate the therapeutic and hygienic value of these altitudes. "One never sees tuberculosis," says my eminent colleague, "in the natives who do not quit the country. On the other hand, you

may be their relations with tuberculous persons, and in whatever region of the earth they make their habitation. They seem to owe this immunity to a certain strength and firmness of constitution which enables them to resist debilitating influences, not the least formidable of which is the tubercle microphyte.

Populations like the negroes of the African coast, to whom allusion is made in the text, when removed from conditions of climate, alimentation, exercise, etc., to which, for generations, they had been accustomed, and to which they have been organically adjusted, and forced to accommodate themselves to quite different conditions, among which may be particularized, bondage to hard task-masters, exhausting labor, insufficient food, severe climate, have readily fallen victims to phthisis. The same may be said of a certain class of foreign emigrants to the New England coast, particularly Irish, who, bringing to this country constitutions enfeebled by hardship and privation, yield to the rigors of our climate and swell the mortality from phthisis, as the city registers show. It is no uncommon experience for physicians to record two, and even three, deaths from consumption in the same family, and in the same season, nor is it unusual for parents coming originally from Ireland, and free from all hereditary tendencies to consumption, to witness their sons and daughters succumb, one after another, to the same disease. The explanation of this fatality, and that of the negroes above alluded to, does not seem to me to be so much in the fact that the immigrant finds the bacillus of contagion in his new habitat, as that his constitution by some inherent or acquired enfeeblement is unable to cope with the difficulties of its new environment, and lacks the faculty of effective resistance, under the altered conditions, to morbid influences generally, and the tubercle-bacillus in particular. The emigrant does not need to come to this country to meet with the microbes of disease, for they exist in his own country; if he elects to make his home here, he must be prepared to encounter and adapt himself to the severities of our climate under penalty of falling a prey to the microbe of phthisis, if by non-adaptation, that stage of physiological depravation is reached which constitutes the proper soil for the bacillus to occupy, and in which it may flourish.

The doctrine that phthisis is a communicable disease ought to find support in the medical history of those places which are resorted to by invalids suffering from the disease. For whither these flock year by year numbers of tubercular individuals, mingling in social intercourse with and inhabiting the houses of the residents, many of whom have themselves chosen the place for their home on account of pulmonary affection.

Not very long ago, according to the *London Lancet* (September 27, 1884), Mr. Thomson, of Melbourne, collected facts to show that tubercular phthisis had been in this way imported into Australia, and he found formulated thereon a germ theory of phthisis. According to Paul Langerhaus in his work on "Madeira," the inference of Mr. Thomson does not apply to this island in which phthisis has not been disseminated in consequence of the annual influx of consumptives. His conclusion seems to be the result of a very careful statistical inquiry. In fine, Dr. Langerhaus holds that the facts pertaining to the medical history of Madeira are wholly opposed to the notion that phthisis is an infectious disease, and rather assign to it a place with such affections as cancer or hæmophilia. His observations go to show "that almost the only individuals to fall ill of phthisis in the colony have been those in whom heredity could be traced, and point to the very great importance of inheritance in the etiology of phthisis."—TRANSLATOR.

will observe it in those who have emigrated to Italy; the reason is plain—the first have not had communication with the phthisical, the emigrants find the disease in Italy."

The best proof that altitude has at best but a doubtful influence, is that if the inhabitants of elevated countries find themselves huddled together in confined spaces, as in work-shops, such as you will see at Joux, at Chaux-de-Tonds, built on the Swiss Jura at 1100 metres of elevation, you will find as many phthisical persons as at Berlin. The town of Joux is peopled with watch manufacturers, who work in close rooms or workshops, where they are constantly in contact with diseased persons.

*Microbic Immunity of Altitudes.* If the immunity of altitudes is (with the exceptions above indicated) conceded, it may be said to be absolute on the uninhabitable mountain heights. Thus a notable diminution in the microbes of the atmosphere has been remarked at an elevation of 500 metres; this has been recently shown by Miquel. At Grundelwald, a height of 800 metres, the microbes are in minimum proportion. Above 2000 metres they no longer exist, except in an inappreciable quantity. At the Eiger, which M. de Freudenreich was the first to ascend in order to analyze the air at 4000 metres above the sea, the atmosphere is absolutely pure; no more microbes. Alas! this asylum of refuge is very high, very far distant!

§ 38. MARINE ATMOSPHERES.

I. *Sea Voyages.* For a long time a curative influence was attributed to sea voyages; the English journeyed round the world for deliverance from their natal malady. Facts have shown that this practice is ill-founded, and Rochard's statistics show that phthisis is proportionately more common among seamen than among landsmen, and that, moreover, it oftener takes the acute type on shipboard than on land; the ship is worse than any military barracks; the influence of sea sir, which might be favorable, is counterbalanced by the vitiated air of the cabin and forecastle.

II. *Marine Atmospherc.* The air of the sea is in fact perfectly pure in so far as it is not altered by land-winds. Miquel has proved this in some recent researches, made with the greatest care, the conclusions of which are as follows:

1. At a great distance from the coast, or on the shore when the wind comes from the sea, the sea air is exceedingly free from microphytes.

2. In ordinary times the sea does not give up to the air the bacteria which it contains in its waves.

3. The sea rapidly purifies the infected atmospheres coming to it from the mainland.

4. For this reason it is an absolute obstacle to the propagation of contagious diseases.

5. The great purity of the air of the sea does not guarantee purity of the confined air of the ships. While at Paris, dust collected from the air contains 14,000 spores per cubic metre, the air taken at sea contains only 500, and three-tenths of these must be laid to the charge of the ship itself. If, then, a vessel arriving from infected localities carries the germs of an epidemic prevailing on the land, it is by the persons, the merchandise, the inert objects which it conveys, and I add by the spores which it brings from landing places.

Captain Moreau, who superintended with very great care the procuration and examination of air in mid-ocean, brought in his mail packet, the Gironde, after a twenty-days voyage across the Atlantic, an atmosphere charged with the spores of fungi and starch granules which could only have come from the islands Lancerate and Tuerta-Vintura, which were the points of embarkation.

The two-fold question of the noxiousness of the air of vessels and the immunity of sea-air has thus been decided by clinical experience and biological experimentation.

§ 39. MICROPHYTES OF THE ATMOSPHERE.

For a long time malarial countries have been regarded as exempt from every other kind of pathogenic influence. The antagonism between paludal fevers and typhoid fever and phthisis has been in a formal and earnest manner maintained by Boudin; let us examine the facts. Are malarial countries really exempt from phthisis? Langalli has seen in a region charged with miasmatic effluvia one hundred and forty-four cases of paludal cachexia, of which twenty-five were complicated with tubercles.

Burot, of Rochefort, and Maurel, of Guyane, have reported that in their respective countries, which are pre-eminently marshy, phthisis makes enormous ravages. There would seem, then, to be rather parallelism than opposition. All the theories, then, respecting the reciprocal antagonism of the divers morbigenous microphytes remain still to be verified.

—A proposal was made last year by the Cuban *Crónica Médico-Quirurgica*, that a medical college should be formed for the purpose of advancing professional interests, material and moral, in the island. A meeting was held in the rooms of the Royal Economical Society, and a committee formed to carry out the plan. A good deal of delay has occurred, but it is hoped that the scheme will be finally carried out.

# HOSPITAL REPORTS.

## CLINICAL LECTURE ON DISEASES OF WOMEN.

DELIVERED AT THE COLLEGE OF PHYSICIANS AND SURGEONS, NEW YORK.

BY PROF. T. GAILLARD THOMAS.

Reported by P. BRYNBERG PORTER, M. D.

Case I. *Anteflexion, giving rise to Excessive Irritability of the Bladder and Probable Cystitis.*

GENTLEMEN: The case now before us has been sent to the clinic by an excellent gynecologist of this city, and we will now see what we can make of it. The patient's name is Mary H. She was born in the United States, is twenty-seven years of age, has been married three years, and has had one miscarriage, but no children at full term.

"How long have you been sick, Mrs. H?"

"Three years."

"That is, ever since marriage. Were you pretty well up to that time?"

"Yes."

"And have you ever been well since then?"

"No."

(You all, no doubt, remember how often I have called your attention to the fact of the patient's illness dating from some miscarriage or delivery at full term. This is almost universally the case in gynecological practice; but there are exceptions to it, and here is one of them. This patient does not trace her complaint to the miscarriage which has been mentioned, but says that it commenced at the time of her marriage; and she is very positive in regard to this point. Having ascertained this interesting fact, let us go on with our investigation of the case.)

"In what way do you suffer, Mrs. H.?"

"From a dragging pain in the left side."

"From anything else?"

"My urine."

"How does that trouble you?"

"I have a very frequent desire to pass water, and when I do so, only five or six drops come away at a time. Then immediately the desire returns again, and I can get no peace at all."

"Then you are constantly making an effort to empty the bladder?"

"Yes. I pass a few drops of urine from fifty to seventy-five times a day."

(You would probably think this was an exaggerated statement, gentlemen, unless you happened to have some knowledge of this class of cases, which are really terrible in character.)

"Are you any better at night?"

"A little; but I get no ease then, for I always have to get up from twenty to twenty-five times during the night."

(From this account you can readily imagine how this constant loss of sleep must tell upon a patient, and how excessively exhausting such a complaint must therefore be. In these cases, then, we always expect to find considerable derangement of the nervous system present.)

"Is there anything peculiar about the appearance of your urine?"

"No, except that it is a little reddish in color."

"It does not contain blood, I suppose?"

"No."

"Has your physician ever examined it?"

"Yes."

"Did he tell you anything in regard to it?"

"No."

"Have you any other symptoms?"

"Pain in the small of the back."

"Is it very severe?"

"Yes, very violent at times."

"Anything else?"

"Pain in the lower part of the stomach." (The patient, you notice, places her hand just above the symphysis pubis.)

"Anything else?"

"Pain extending down the limbs."

"Anything else?"

"Pain at the back of the neck and running down between the shoulders." (This nuchal pain, which, you must remember, is not a headache, is not infrequent in cases like this, where there is nervous exhaustion; and in order to get relief from it, patients often throw their heads back, or otherwise change the position of the head; which this woman also tells me she is in the habit of doing.)

"Are you ever hysterical?"

"No; but I am excessively nervous."

"How are your digestion and appetite?"

"Pretty good."

"Are your bowels constipated?"

"Not as a rule."

I have drawn out the symptoms very fully and slowly, intentionally in this case, because it answers perfectly to the description which, curiously enough, I was giving you at my very last didactic lecture, as many of you, no doubt, will recall. The principal symptoms here present are referable, of course, to the bladder; but now let us inquire to what cause they are due. A stone, by the irritation it would give rise to, by its presence in the bladder might give rise to them; or, if there were no stone present, cystitis alone might do it. Or, again, there might be some abnormal condition of either the uterus or the ovaries, which would result in such pressure upon the bladder as to set up symptoms as violent as these. For instance, either well-marked anteflexion of the uterus or a fibroid in certain positions would be quite capable of producing them. But whatever may be the real cause, we are groping entirely in the dark in regard to it until we resort to a physical examination; for that is the only way in which we can settle the question definitely.

Accordingly, I proposed an examination here, and the patient being placed upon her back, the first thing that I noticed upon introducing my finger into the vagina was that the cervix uteri was not exactly in its normal position, but pointing a little more towards the hollow of the sacrum than it should have done. Then, by means of conjoined manipulation, I ascertained that the body of the uterus, which I found to be somewhat larger and harder than normal, was lying forward upon the bladder in such a position that the latter was almost completely shut up by it; and, in addition, discovered that the uterus was apparently free from any outgrowth whatever. To such an extent was the posterior wall of the bladder pressed against the anterior wall that the viscus had grown to be exceedingly sensitive; and I was at once struck with the fact that its walls are

much thicker than is ordinarily the case. Then, with two fingers in the vagina behind the cervix, I continued my endeavor to find out whether the anteflexion noted was secondary to any mass behind the uterus which was thus forcing it forward; but nothing of the kind could be detected.

Now retaining the above picture of the case in my mind, I changed the position of the patient to the side, and bending the uterine probe to correspond with the amount of curvature which I judged to be present in the organ, I found that it passed to the fundus without the slightest difficulty, except that its introduction caused the patient considerable pain. As there was nothing else worthy of note about the uterus, I now stopped the examination. In order to make it complete, the urine should also have been examined; but there was not time for this then, and it will be done later. But have we arrived at a diagnosis in the case? I should certainly say that we have; although it may be that a week from now, on making a second examination, I may find that I was mistaken. For instance, at another time I might possibly discover that there really was something behind the uterus pushing it forward, and which was of much more importance than the anteflexion. But, you will say, the uterus would be just as much anteflexed then as it is now. Yes, undoubtedly; but this would no longer be the true diagnosis of the case, as I trust by this time you understand what a diagnosis is.

Well, this poor woman has now been suffering for three years, and the chief symptom of the case has been this constant irritability of the bladder. What was it that happened three years ago to give rise to all this trouble? This it is impossible to determine with certainty at present; but the patient says that at this time she received some very rough treatment, and consequently attributes her complaint to this cause. At all events, it is highly probable that it was on account of some mechanical cause that the uterus became bent forward, as we now find it. In the same way that the affection of the bladder has been set up here by this anteflexion, we find that irritability of the rectum is occasioned by retroflexion of the uterus, so that severe dysentery sometimes results. With a foreign body pressing upon the bladder for three years, we would naturally expect a very marked effect to be produced; and although the statement of the patient that she has to get up twenty or twenty-five times during each night to pass water is probably to be received with some allowance, there can be no posible doubt that in such a case as this there is a vast amount of terrible suffering. As a result of this constant and active work entailed upon it, the muscular structure of the bladder-walls has become greatly hypertrophied (and hence the thickening noted), just as a blacksmith's biceps becomes hypertrophied on account of the continual exercise to which it is subjected. We thus have another influence at work in addition to the direct pressure upon the bladder by the anteflexed uterus; and so both its muscles and nerves are interfered with, and become deranged in their action. One result of all this has been a marked hypertrophy, and I have no doubt that at length a true cystitis has been set up. If this has been the case, however, it is merely a secondary cystitis, dependent upon the antecedent hyperæmia and muscular and nervous irritability. Whether there is actually cystitis here or not will have to be determined by the examination of the urine, which has not as yet been made.

It may perhaps now be asked, Can this patient be cured at once by the replacement of the uterus? and to this I unhesitatingly answer, no. If this woman were cured in six or eight months I should be perfectly satisfied with the result of the case. It is altogether probable that we may have to treat cystitis here; but the very first thing of all to be done is to remove the exciting cause of all the trouble. The first step in the treatment is, then, to restore the uterus to its normal position.

The prognosis in this case depends to a very large extent on whether or not we are able to cure the anteflexion; and I believe that this can be accomplished from the fact that I am perfectly able to replace the uterus by means of the uterine sound, which, of course, should be always used with great caution for this purpose. If, on the other hand, it were not possible to reduce the anteflexion, I believe that the only thing that would afford this poor woman relief would be to make an artificial vesico-vaginal fistula. By thus allowing the urine to escape all the time, the bladder would be kept entirely empty, and so permitted to rest.

Let me now tell you how I should propose to conduct the treatment of this case. At first the uterus should be restored to its normal position about three times a week; the cervix being pulled forward, and a tampon of cotton soaked in glycerine introduced for the purpose of supporting the fundus. After this the patient should remain on her back in bed for forty-eight hours, when the tampon should be withdrawn, the uterus again restored and the other procedures repeated. After a little while an appropriate anteversion pessary should be applied, and then the patient could get up and attend to her regular duties. The pessary would keep the uterus permanently in place, and would, therefore, by relieving pressure greatly diminish the trouble about the bladder. It would not *cure* it, however: and for this other measures would be necessary. By means of graduated sounds, and eventually by the introduction of the finger, the urethra should be thoroughly dilated; and this would have the effect of markedly relieving the spasm which now exists. Then, alterant or deturgant injections into the bladder should be made, and for this purpose very weak solutions should be at first employed; the strength of the injection being increased from time to time as the patient is able to bear it. Thus a single grain of nitrate of silver to a pint of distilled water would be sufficient at first; or we might employ weak solutions of carbolic acid or creosote.

The dragging pain complained of in the left side is no doubt due to the broad ligament being put upon the stretch; although why one of the broad ligaments should be affected in this way and not the other is not very clear. The permanent restoration of the uterus to its normal position will, no doubt, put an end to this, although it may be some little time before the pain altogether disap-

pears. In regard to the trouble about the nervous system seen in this patient, the loss of sleep to which allusion has been made is in all probability its chief factor, and undisturbed repose at night will be the very best remedy for this. This is the view which I take of the case and the plan of treatment which I would suggest for its cure. We must not expect any very prompt and wonderful results in a case like this, which has existed a long time; but still I do not doubt that in the course of a few months, and without any surgical procedure, this poor woman, who now suffers so intensely, could be entirely cured.

Case II. *Large Sub-peritoneal Fibroid.*

The next patient is Mary G., aged thirty-seven, a native of Ireland, and unmarried.

"How long have you been sick?"

"About three years."

"Were you perfectly well before that?"

"Yes."

"What was the first thing that you noticed?"

"A pain about the right hip."

"Anything else?"

"After which the pain got around to the other side too."

"And do you have much pain now?"

"No, only sometimes I feel a great soreness."

"Is there anything else that you complain of?"

"Nothing except neuralgia in the head sometimes."

"Are you quite regular in your monthly periods?"

"Yes; perfectly so."

"Do you have much pain at the time of your sickness?"

"I have a good deal in my back."

"Have you only felt this lately, or have you always felt it?"

"Always, since I first had my turns."

Now, gentlemen, I think you must all have noticed the paucity of symptoms related by this patient, and yet the physical signs, as you will find, present many points of great interest. When I ask her if she feels able to work, she replies that she has been out of a situation for a couple of weeks, and is a little run down, but at the same time she thinks she is quite capable of performing the tasks to which she is accustomed as housemaid. Her pulse is fully as good as my own, and her countenance, you observe, is that of a perfectly healthy woman. The only symptoms of any consequence which she has is one that she has said nothing about before the class, viz.: some enlargement about the abdomen which she has noticed, and when I place my hand over it, I find that it is perhaps as large as the abdomen ought to be at the seventh month of utero-gestation. If such a case should come to you in private practice, a very grave responsibility would devolve on you; for you would be called upon to decide what the character of this enlargement was, and on your decision might depend the good name of the patient. While I have been speaking the same idea has no doubt been passing through your minds which occurred to me when I first saw this woman, and it has probably seemed to you altogether likely that the trouble here present is one of months rather than years in duration, notwithstanding the fact that she states that she has continued to menstruate regularly all along. But her physician, who has sent her here to-day in order to get an opinion of the case, believes that this is a trouble which has now lasted fully three years.

In instituting a physical examination in such a case as this, we should always make the inquiry in our mind, What are the probabilities here? In the first place, it is possible that the enlargement noticed is due merely to tympanites. If this should be the condition that is present, there are certain circumstances about the case that would very satisfactorily account for it. The patient has been out of employment for the last two months, and, having nothing special to occupy her mind, has gotten into a way of moping, so that we would naturally expect to find her digestion impaired. Then, the character of the diet upon which she has been living has no doubt been such as to give her more or less dyspeptic trouble. But as soon as we resort to percussion here, we find that there is nothing like tympanites present. If there were, there would, of course, be a drum-like resonance all over the seat of abdominal enlargement, resulting from the meteorismic inflation of the intestines. So far from this being the case, however, we ascertain that there is everywhere complete flatness instead; like that which is heard when percussion is made over the thigh, for instance.

Again, we may have to deal with utero-gestation here. This abdominal tumor is certainly as large as a uterus in the seventh or even eighth month of pregnancy. When palpation is made over it, however, it does not feel at all like a uterus in this condition; for, instead of being smooth and symmetrical in character, it presents quite an irregular outline. Then, when a vaginal examination is resorted to, a perfect hymen is found to be present. Of course, the presence of such a hymen does not preclude the possibility of utero-gestation. Cases have been known where women having it have gone on to delivery at full term without its being disturbed; but such instances are exceptional, and whenever this is found to be the case, the hymen is usually tough and fibrous. In this patient, however, it is not at all of this character. Like most of the patients whom we get at this clinic, she belongs to the Irish peasantry, and I know of no more virtuous class of females than these. In addition, we find by the vaginal examination that the cervix uteri is perfectly undeveloped, and presents the typical characteristics of the virgin organ.

Having progressed thus far in my examination of the case, I began to suspect that there might be some serious trouble present, and an ovarian cyst suggested itself to my mind. But if it were a tumor of the ovary I felt perfectly sure that the patient would scarcely be as well as she is, after it had existed for three years. The probabilities are that her health would by this time have become very seriously impaired. As I have before had occasion to remark, three years is the average duration of ovarian cysts, when left to nature. Occasionally a monocystic tumor will last very much longer than that, and I once removed one at the Woman's Hospital which had existed for nine years; but such cases are very rare exceptions to the general rule. There are also other negative evidences of the mass not being ovarian in char-

acter; but I have not time now to dwell upon them. I will merely say, in discussing this supposition, that no wave can be excited across its surface.

Probably the next thing that would occur to you would be that we have to deal here with a large uterine fibroid; and without going further into a differential diagnosis, I will state that such a hypothesis seems extremely probable for the following reasons:

1. The fact that the tumor has continued so long without depreciation of the patient's health.
2. The entire absence of any sense of fluctuation in the mass.
3. The lack of symptoms.

It is probable, then, that this is a subserous or subperitoneal fibroma, and that there is no enlargement of the uterus itself in connection with it.

The physician who has had charge of this case has told the woman that the best thing for her to do would be to get admission to a hospital; but if the above diagnosis is correct, I am perfectly sure that this is the very worst thing that she could do. It is far better for her to obtain a situation as a domestic, where she will have constant occupation, as well as wholesome food and cheerful surroundings. In a hospital she would have nothing to do but to think about herself and her ailments; and this, I am confident, would have the worst possible effect upon her condition. Then, again, what could we do for her in the way of treatment if she did go to the hospital? Ergot, although often a great benefit in the other varieties of fibroid, I do not think of much service in the subperitoneal form. It is quite possible that the patient will go on to the menopause without any increase in the size of the tumor, and even if it should become larger, that its growth may be very slow. As to any operation here, I do not hesitate to say that such a procedure would be positively criminal in a case like this. It is altogether probable that if the tumor were to be removed, it would also be necessary to take out the whole or the greater part of the uterus with it. A good many uteri have at different times been removed in New York; but I have yet to hear of the very first case in which the patient survived the operation.* In undertaking the removal of such a tumor as this we never can tell whether it will be necessary to remove the uterus or not; and I regard it as altogether one of the most dangerous operations in surgery. In one case upon which I operated about a month ago, I found it necessary to remove the upper portion of the fundus, on account of its intimate connection with the fibroid; and the patient fortunately recovered. But in the present instance such an operation would be wholly unjustifiable. When a patient has to cudgel her brains in order to get up any symptoms to tell you, you may feel pretty confident that there is no immediate necessity for any operation; and even if the tumor were ovarian in character, it would not be right to remove it as long as her health remained as good as at present. All that this woman needs is sufficient occupation to keep her from growing morbid in regard to her trouble, the most nourishing diet, and a course of such appropriate tonics as will best contribute to render her condition such that further increase of the fibroid will not be probable.

*Since this lecture was delivered, Prof. Thomas has himself successfully removed the entire uterus in one instance; which is the only successful operation of the kind ever performed in New York. P. B. P.

## Medical Societies.

### OBSTETRICAL SOCIETY OF PHILADELPHIA.

Stated meeting, Thursday, May 7, 1885.

The President, B. F. Baer, M. D., in the chair.

The President read the following report of a case of

**Secondary Ovariotomy**

and exhibited the specimen, a small papillomatous cyst:

Mrs. S., æt. 33, married first at fifteen years of age; became a widow at twenty, and remarried at twenty-six. Had one child only by the first marriage, seventeen years ago. Enjoyed good health, except that she has always been very nervous, until nine years ago, when she suffered from an inflammation in the pelvic region, which confined her to bed six weeks. Has suffered ever since from profuse and frequent metrorrhagia, with paroxysms of left ovarian pain. About four years ago she also began to suffer from hysterical attacks of an epileptiform character. Two years after these nervous manifestations appeared—in the spring of 1883—she noticed that her abdomen was beginning to swell. The growth continued to increase, and with it the metrorrhagia, pain and epileptiform seizures. She also lost flesh rapidly, and became weak and bed-ridden. In January, 1884, ovariotomy was performed. After her recovery, which was slow and despaired of for some time, she enjoyed comparatively good health. The menstrual flow became regular and painless, and the convulsions ceased entirely. But in the September following, she had another attack of uterine hemorrhage, which lasted three weeks. Pain also returned, in character like that attending the development of the first tumor, but it was now located on the right side instead of the left. In October she consulted my friend, Dr. D. J. Miller. Pain and hemorrhage were at this time very severe, and she was weak and anæmic. On examination, Dr. Miller found an abnormal development in the region of the right broad ligament, about the size of an egg. This was closely adherent to and apparently within the folds of the ligament. It was very tender to the touch, but there were no constitutional evidences of acute inflammation. Shortly after this she had a recurrence of the epileptiform convulsions.

Treatment seemed to control the symptoms for a time, but from the latter part of December they increased steadily. The constant drain from the metrorrhagia, the increasing violence and frequency of the paroxysms of pain and the convulsive attacks, began to tell in a marked degree upon her health in loss of flesh and strength. In February, 1885, through the kindness of Dr. Miller, I saw the patient. At that time the

growth had attained the size of a large orange; it occupied the right side of the pelvis, displacing the uterus to the left, and seemed to be closely attached to the broad-ligament and the uterus. I agreed with Dr. Miller's diagnosis of ovarian cystic disease, and although the tumor was evidently adherent to the uterus, and broad-ligament, and therefore probably did not have a pedicle, I advised its removal for the relief of the grave symptoms.

*Operation*, April 17, 1885, at 12 m., assisted by Drs. D. J. Miller, Ed. H. Small, and G. P. Perley, in the presence of Drs. B. C. Miller and —— Plummer.

*Incision* one-half inch to right of old cicatrix, three inches in length, passing through the body of the right rectus muscle. After clamping all bleeding vessels, I opened the peritoneal cavity, and found that the omentum was adherent to the line of the first incision, which had been about eight inches in length; and that adhesions also existed between portions of the intestine and the location of the former pedicle on the left of the uterus. The necessity of pushing the omentum and intestine aside to get at the tumor, and fear of breaking the adhesions by so doing, together with the small size and deep-seated location of the cyst, made the required manipulations exceedingly difficult. When I obtained a view of the upper surface of the tumor, it looked not unlike the pregnant uterus in color and vascularity. Its outer wall was interlaced with a network of veins, some of them as large as a quill. Exploration with the fingers showed it to be so deep in the pelvis and so closely attached to the uterus, fallopian tube, and broad ligament, that they seemed to be one mass, the whole attached by a broad surface to the pelvic floor. The prospect of completing the operation was now anything but bright, because of the danger of opening this very vascular wall for the purpose of enucleation. But I began with an attempt to separate adhesions, and after patient, gentle, but persistent efforts, they began to yield, and I was finally enabled to get two fingers around the posterior surface of the tumor, without producing much hemorrhage. I next passed a small trocar of the aspirator, and drew off about six ounces of a straw-colored fluid. This gave me a little more room, and I now hoped to be able to remove the tumor entire, and with that purpose in view, I endeavored to still further separate it from its attachments; but so much hemorrhage occurred that I was compelled to desist. I next very carefully broke the outer wall of the cyst with my finger, and proceeded to shell out the lining membrane; but it was so friable that it gave way, and my finger entered the cavity of the partially-collapsed sac. I found it filled with a papillary cauliflower-like growth. This I removed to prevent its escape into the peritoneal cavity, where I feared it might propagate by contact if lost and allowed to remain. I then completed the enucleation of the internal surface of the tumor. The thick and vascular external wall was now so thinned and drawn out that it formed a sort of pedicle. This I transfixed and ligatured, cutting away the redundant portion. Then after thoroughly removing all foreign material, I closed the abdominal incision with seven silk sutures, and returned the patient to bed. She recovered promptly from the ether, showing no evidence of shock. At 8 p. m. her temperature was normal, and pulse 126. On the evening of the second day her temperature rose to 101°, and a free metrorrhagia occurred. The temperature fell within a few hours to 99⅘°, and did not afterwards rise above 100°. On the fourth day I found union so complete and solid that I removed the sutures. She sat up on the nineteenth day, and has now entirely recovered from the operation. The result on the hystero-epilepsy and other nervous symptoms will be reported later.

It is of vital importance to every woman who must submit to the operation of ovariotomy, that the condition of the opposite ovary should be thoroughly investigated. If found to be diseased, even slightly, I think it should be removed, to shield the patient from the danger of a probable second operation. But when such nervous symptoms as existed in this case are present, though the opposite ovary should be found to be healthy, I think it is imperative upon the surgeon to remove it, with the hope of relieving these symptoms. It does not add much to the danger of the operation; indeed, in my own practice it would seem to have had the reverse effect, for I have had but a single case of double ovariotomy, though about one-third of my cases have been of that character.

Dr. Montgomery takes exception to the statement of advisability of removal of the other ovary. The second ovary, even if slightly diseased, may be the source of repeated pregnancies. He had, in one case of ovariotomy, left the other ovary, although it was enlarged and contained several small cysts; pregnancies and the delivery of living children occurred subsequently, but there has been no sign of another ovarian tumor. In some cases it might be advisable, but no such fixed rule should be formulated.

Dr. Goodell has performed 144 ovariotomies, and has had secondary operations in two of them in which the remaining ovary was apparently normal at the time of the primary operation. In all cases after the menopause he now removes the second ovary, even if it seems to be perfectly healthy.

The President was much gratified to have Dr. Goodell's endorsement of his opinion upon the advisability of the removal of the second ovary.

Dr. Montgomery reported an

**Oophorectomy.**

Mrs. C., æt. 42, consulted me in Novembr, 1884, with the following history: She is married, but never became pregnant. Menstruated once when fourteen and not again until seventeen, when she became regular; but the flow was always preceded for a few days by severe cramp-like pains which continued during the menstrual period. In her earlier menstrual life the flow was quite free, but later it has been scanty. The pain was felt in the back and in each inguinal region. She had an attack of small-pox during her fourteenth year, but otherwise enjoyed good health until a few years ago. Two years since she noticed that she was losing flesh, her appetite became poor, she had constant nausea and frequent vomiting; the pain in the back and inguinal regions occurred in the after part of each day, was exceedingly

distressing and interfered with her rest at night. This pain was greatly aggravated by walking, standing, riding in cars, and by coition. When she came under my care she had lost considerable flesh, had a very irritable stomach, and was not free from pain an entire day at a time. The uterus was retroverted, apparently bound down to a thickened mass, posterior only, and presented a catarrhal endometritis. Pressure upon the fornix vaginæ gave rise to severe pain. Some efforts were made to raise the uterus by means of tampons of cotton, but they only increased the pain. The patient soon became unable to move about, and was confined continuously to bed. The pain was constant during the greater part of the twenty-four hours, so that during the last three months she had had but three nights of uninterrupted sleep, though morphia was given daily. The troubles from the first had been ascribed to ovarian disease, and every effort was made to improve her condition preparatory to the removal of the ovaries, but without avail. Her emaciation became extreme, when it was decided to run the risk of the operation. At this time her menses had been absent about two months.

April 1, assisted by Drs. W. H. and C. B. Warder and Dr. Martin, the ovaries were removed. They were situated in Douglas's cul-de-sac, behind and beneath the uterus, and were slightly adherent. Both ovaries were enlarged and hard, and presented a number of small cysts. The latter were found also in the broad ligaments. The wound was closed with silk sutures and dressed with salicylated cotton. Her subsequent comfort was very much interfered with by the pressure from lying, which, in spite of all precautions, produced a small slough over the sacrum. Her highest temperature, 102°, was reached at 6 p. m. on the 20th. The wound healed by first intention. The sutures were removed on the 6th day. After the third day no anodyne was given, but she slept nine hours each night. All her old distressing symptoms vanished as if by magic, her appetite and digestion became good, and she began to improve in general appearance. There has been no recurrence of the pain since the operation.

Dr. Henry Beates read a clinical report of a case of

**Condyloma Urethræ,**

It having closely simulated epithelioma in appearance. As the routine notes will be uninteresting, they will be omitted. Mrs. D., multipara, æt. 29, sought relief from an intense dysuria, which was of a little more than a year's duration. A history indicating an attack of gonorrhœa, while not positive, was sufficient to render it probable. A year or two after marriage she was attacked with either acute cystitis, urethritis, or gonorrhœa, which disappeared, but was followed, after a lapse of two or three months, by frequent micturition and vesical tenesmus. After a few weeks, a urethral discharge, purulent in character, was noticed, followed soon after by the development of condylomata on the margin of the meatus urinarius. Coincidently, the tenesmus and dysuria increased, and by interference with sleep, and suffering entailed, resulted in impairment of health. Remedies had been prescribed, but no examination of the local condition made. When first seen, the patient was almost constantly harassed with tenesmus, and was suffering intensely. She would retain the urine as long as possible and void it only when the voluntary control of the bladder was overcome by the vesical contraction. Examination revealed numerous condylomata originating from the margin of the meatus and interior of urethra. The meatus and its surrounding neoplasms were bathed in a sanguine or purulent fluid and the inferior border and membrane of vestibule were the seat of destructive ulceration. This latter so closely simulated the appearances seen in ulcerating epithelioma, that that diagnosis was confirmed by a gentleman who saw the case with me. The external growths were snipped off with scissors, and the bleeding bases staunched with nitric acid. After a close preparatory treatment, anæsthesia was produced, the urethra dilated, and the condylomata, which were numerous, and derived from the urethral membrane only, removed with the dull curette. A curious point was the distinct demarcation of the morbid condition, which was limited at the vesical terminus of the canal, and the perfect freedom of the vesical membrane from the growths. A solution of chloral, iodine, and carbolic acid was thoroughly applied, and had the effect of stopping hemorrhage. The ulcerated tissue and a portion of the urethral flow was incised, and the margins treated with nitric acid. The microscope revealed hypertrophy of the mucosa, with increase of epithelial elements and capillaries. Four years have elapsed, and no evidences of return have presented themselves. I believe the cause of these condylomata to have been a specific urethritis, which, becoming chronic by its irritating discharge, determined the growths.

**Leiomyoma Uteri.**[1]

Mrs. M., German, æt. 37, mother of one child, history free from neoplastic predisposition. At 13 the catamenial function was started, and became regular soon. Congestive dysmenorrhœa for a few months at first; once every twenty-eight days, lasting four days. Married at nineteen; conceived two years later; delivery at term, after a tedious instrumental labor. About a year later a steadily increasing menorrhagia commenced, with leucorrhœa. She was unsuccessfully treated for this for two years, and came under the care of a well-known practitioner of Philadelphia, since deceased, who introduced pieces of lunar caustic into the uterine cavity, and allowed them to remain there until dissolved. After a few weeks the menorrhagia was relieved, and fair health was enjoyed for more than two years. The hemorrhage recurring, she again visited Philadelphia, and was treated with the dull curette and endometrial appliances. She remained free from her trouble for three years, during which time she met with financial reverses, and was subjected to the depressing influence of trouble. She had never been impregnated since the birth of her only child. Hemorrhage recurring, she entered a hospital in western Pennsylvania, where she remained two years under unsuccessful treatment. All treatment was abandoned, and the hemorrhagic condition suffered for nearly five years, when threatening death brought her again to Philadelphia. She attended the

Nurse's Home Charity, where I saw her, as an assistant, in 1879. Her treatment included iodine to the cavity, ergot and gallic acid internally, and the curette. In October of the same year, she placed herself under my care. I was called to see her, and found her in profound syncope. She had occasionally manifested mental aberration, due entirely to the exsanguineous state and for two or three months was bleeding almost constantly. A laminaria tent was promptly placed, and a thorough examination made, which disclosed the presence of a neoplasm, occupying the right lateral and posterior uterine wall. Its contour was regular, base broad, consistence that of uterine tissue. Its submucous location was determined and enucleation effected. The growth was as large as a doubled fist, and required division before it could be delivered. It weighed nine ounces. Profuse bleeding occurred during the operation, and the shock was alarming; reaction, however, occurred. Microscopic examination revealed a typical leiomyoma uteri of the telangiectatic type. When last heard from, a few months ago, she was enjoying excellent health.

(*To be continued.*)

# EDITORIAL DEPARTMENT.

## PERISCOPE.

### Three Cases of Tubal Pregnancy Successfully Operated upon at the Period of Rupture.

Mr. Lawson Tait thus writes in the *Brit. Med. Jour.*, April 18:

These cases are the seventh, eighth, and ninth of their kind which have occurred in my practice; and all of the nine save the first have recovered, and continue, up to the time of writing, in good health. Such a series, though not a large one, is sufficient to prove that these cases may be treated with perfect success under the improved and bolder proceedings adopted in abdominal surgery within the last six years. In fact, they are almost of themselves sufficient, when taken with the established fact that the great bulk of such cases have a fatal termination when left alone, to determine the propriety of immediate operation in all such cases. They also confirm the views which I have already expressed, that cases of extra-uterine pregnancy are all tubal in origin, arising from a ruptured tube about the tenth or twelfth week of pregnancy, at a point which is determined by the site of the placenta. This explains the extreme fatality of the rupture. As not a single instance of extra-uterine pregnancy at the time of rupture has been discovered other than of tubal origin, we are absolutely wanting in evidence that there is any other origin for this displacement.

Case 7. E. D. H., aged 36, under the care of Mr. Wiren, was admitted to hospital on November 24. She had not menstruated for nearly four months, and had never had a child, although she had been married twelve years. She was seized, some time early in November, with a violent attack of abdominal pain, for which she kept her bed and was under treatment. When I saw her, the uterus was fixed and a tender mass existed on the right side. I recognized this as possibly a ruptured tubal pregnancy. I operated on November 28, and found the abdomen full of bloody serum and loose clots. The left Fallopian tube had ruptured to the extent of nearly three inches; it was adherent, and required considerable care in its removal, hemorrhage being very free. The pedicle was tied by the Staffordshire knot, and the pelvis drained. The patient made a very rapid recovery, and went home on January 5. The fœtus in this case was not found; but the placenta occupied the dilated tube, and the rupture had taken place quite at its edge.

Case 8. S. B., aged 41, married at 17, had eight children, the last being ten years old. She had what was supposed to be a miscarriage in May last. The catamenia again ceased in November, 1884. She was sent to me by Mr. Scott, of Wolverhampton, early in February, and I found everything in the pelvis fixed, with symptoms of acute pelvic peritonitis. I opened the abdomen on the 9th, and found a large quantity of serum and clot in the pelvis. I found the fœtus lying loose, close to the ruptured right Fallopian tube, from which the placenta was extruding. The diseased organ was removed with difficulty, and the pelvis drained. The patient made an easy recovery, and returned home on March 5th.

Case 9. A. S., aged 26, under the care of Dr. Malins, had been married nine years, and had had four children, youngest child being 17 months old. After this confinement, she had a long and serious illness. The periods again became arrested just before Christmas. About the middle of February, she was attacked by violent pelvic pain. On the 23d, I found all the pelvic contents fixed. I opened the abdomen, and found, as usual, loose clots, bloody serum, and a largely distended and ruptured left Fallopian tube, in which there was a placenta. The fœtus was not found. The Fallopian tube was removed with very great difficulty, the hemorrhage, during the operation and after it, being very alarming. The pelvis was drained. The patient made a very admirable recovery, and left the hospital on March 11th.

—"I tell you, sir, no woman can be fully trusted," exclaimed a cynical man to a friend. "Why, just look at poor Sniffson. Didn't he love that wife of his? Didn't he think that nothing was too good for her? And how she has requited him!" "How?" asked the other. "Gone and had twins—these hard times."

THE

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D. G. BRINTON, M. D.,
JOSEPH F. EDWARDS, M. D., } EDITORS.

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### SCIENCE AND PRACTICE.

The gulf between scientific and practical medicine is a wide one. The majority of the profession are practical men, while comparatively few have either the time or inclination to pursue the scientific aspects of medicine. What there is of science in medicine is based rather more upon observation—upon clinical, bedside observation—than upon scientific investigation; though, of course, we all recognize that science and practical observation in our profession are very closely allied, and that they must go hand-in-hand. Yet while we say they are closely allied, at the same time, paradoxical as it may seem, we must repeat our opening sentence, that the gulf between scientific and practical medicine is a wide one.

In no instance is this more thoroughly illustrated than in the mass of literature and talk with which for some time past we have been deluged upon the subject of CHOLERA. From the scientist's pinnacle we have two views spread before us; two views diametrically opposed the one to the other. From one standpoint we have discovered absolutely the cause of cholera; it is a small, curly, living body, the famous *comma bacillus*; from the other, IT IS NOT; this is the scientific position.

The practical side has also two aspects; the one, that held by the younger men, who, having had no experience with the disease, listen to all they hear, read all they can, and prudently conclude to tarry yet awhile before they make up their minds definitely to any formulated belief; the other, that of the older men, who having passed through several epidemics of the disease, having a practical acquaintance with it (many of them familiar with the scientific views), conclude that we know no more to-day about the etiology of cholera than we did in years gone by.

This difference was never better illustrated than in a discussion which recently took place at a well-attended meeting of the Philadelphia County Medical Society, when Dr. Ezra M. Hunt, of New Jersey, read a paper on the prevention of cholera. The speaker did not touch the etiology

of cholera, which was beyond the scope of his address; but in the discussion which followed, the question of causation was thoroughly ventilated by both old and young.

It was held by one distinguished pathologist (Dr. Formad) that cholera was nothing more than a catarrh of the intestinal mucous membrane, and that death was caused by exhaustion. This speaker admitted that he had never seen a case of cholera since he had reached the age of maturity. It was announced by another distinguished pathologist (a disciple of Koch), that the comma bacillus could only live in the vitiated atmosphere of a privy for twenty-four hours, which was rather in contradiction (supposing this bacillus to be the cause of cholera) to the observation of the older gentlemen present, who gave it as their experience that in past epidemics the disease was always most prevalent on ship-board in the steerage, and in cities in the dirtiest portions, and in individuals among those who were the most neglectful of all sanitary rules.

Yet this statement would seem to bear out the reports that last year the scavengers of Toulon, Marseilles, and Naples enjoyed a most marked immunity from the disease. Whether this was due to the law of tolerance, or whether *foulness* really does possess a germicide power in this particular instance, we do not know, though we incline to the former view.

The question of the causation of cholera as of all other zymotic diseases, and, indeed, of many diseases not hitherto classed under the head of zymotic, is two-sided; the scientific, referring it to a living organism, to a germ, about the intimate nature and properties of which we know but little, and are not likely to know much more of a *satisfying* nature, and the practical, which, looking to appreciable surroundings and conditions, seeks to deduce from a number of such observations, some nearly all-pervading circumstances or peculiarities of persons or surroundings that will be accountable for the diseased or morbid condition under consideration. The scientist starts to work out a theory; the practical man seeks to systematize facts and deduce conclusions from them. From this latter class has sprung the collective investigation of disease, a move that promises to do much towards elucidating our knotty problems; from the former class spring individual investigators, many of whom follow closely in the footsteps of others.

Unfortunately, there is a certain amount of antagonism between these two classes. The practical men are much too apt to sneer at the teachings of the scientists, instead of carefully considering the practical value of their scientific investigations. Were the busy, every-day physician to carefully read, ponder over, and practically deduce from the laborious researches of the scientist, we would have a combination that would be very productive. We should be neither too willing to accept nor too anxious to reject; we should be open to receive, to weigh carefully, and to discriminate between that which is chaff and that which is wheat.

## Notes and Comments.

### Cocaine in Senile Gangrene.

Owing to its local anæsthetic properties, Dr. John Gould (*Brit. Med. Jour.*, March 28,) was induced to try the effects of cocaine in a case of senile gangrene, occurring in an active and excitable man, aged 67. He had worked hard, both mentally and physically, and the heart's action was very feeble. About fifteen years ago, he had a serious attack of suppressed gout and congestion of the liver, and, some time after this, he suffered from diabetes. He informed him that his father and grandfather both died of gangrene of the feet. He came under Dr. G.'s care suffering intermittently from indigestion and sluggish liver; this was followed by œdema of the feet, and a return of the diabetes, which, under suitable treatment, soon disappeared.

Shortly after this illness, he complained of pain in the second and third toes, which continued to increase, and, at the same time, the toes grew dark in color, eventually becoming unmistakably gangrenous. The gangrene gradually extended to the dorsum of the foot for about three inches; the pain was perfectly agonizing. Amongst other applications, poppy fomentations were tried; linseed poultices saturated with laudanum; painting the part with equal parts of tincture of aconite,

opium, and chloroform; also an ethereal tincture of belladonna; none of which gave the slightest ease. At night, the patient had a draught of bromide of potassium and hydrate of chloral, twenty grains of each, with eight grains of Battley's solution of opium; this had frequently to be repeated before sleep could be obtained.

He now thought it to be a fair case for the trial of cocaine, and accordingly applied a four per cent. solution of the hydrochlorate, first rubbing it into the sound skin contiguous to the gangrene, and afterwards applying a piece of muslin saturated with the solution. Over all, a piece of gutta-percha tissue was placed, to prevent evaporation, the gangrenous part being dressed with carbolic oil. The result of the first application was highly satisfactory, the pain diminishing considerably; the subsequent applications, made once a day, were followed by a most decided relief, so that half of the night-draught was sufficient to procure sound sleep for many hours.

Of course, cocaine was not used with an expectation that it would either cure, or even arrest the progress of the disease, but with the hope that it might mitigate the excruciating pain, which it did in a most decided and satisfactory manner up to the last, thus affording as much comfort to the friends as it did relief to the suffering patient.

### The Communicability of Consumption.

Apropos of the present vexed question as to the contagiousness of consumption, or, to speak more scientifically, of pulmonary tuberculosis, we note, as of interest, a case which Dr. John C. Thorowgood reports in the *Brit. Med. Jour.*, May 2, 1885, as having occurred in his experience long before we had heard of the tubercle bacillus. He says:

A woman was admitted, under my care; and, when I had examined the upper part of her chest, I said that the apices of the lungs seemed clear. When I examined posteriorly, I found a well-marked cavity at the base of the right lung. The existence of this limited disease caused me to inquire rather specially into the history of the case, and I learned that this woman had for many months nursed her husband, who had died of consumption, and who suffered much in his throat. I remember observing to my assistants, at the time, that it really looked as if a germ of disease had been drawn by the patient into the right bronchus, and this had set up destructive disease in the lower part of the right lung. The patient left the hospital much relieved, and I have not heard of her since. We know that in warm countries, such as Italy and Spain, consumption is regarded as a contagious disease. I can understand this; for it is in such climates where the most active and rapid forms of consumption occur, and the disease is often brought to a high state of cultivation by the way in which the patients are confined to close, airless rooms. Tubercle-bacilli grow and multiply in a congenial soil, just like mushrooms on a dung heap. In cold climates, the disease is very often of inflammatory origin, and fairly amenable to treatment.

Practically, I do not think there is any risk to persons, whose mucous membranes are sound and well nourished, in attending upon those who are ill with any form of phthisis, provided the attendant do not sleep in a room with the patient, and get a due allowance of open-air exercise. When, however, any one who is about among consumptive people begins to cough, it is a sign of disturbed and enfeebled mucous membrane; the soil is being prepared for the bacilli; and at once such an one ought to get right away from all that savors of phthisis, and make a sea-voyage.

## SPECIAL REPORT.

### OPHTHALMOLOGY.—NO. XVIII.

BY CHAS. S. TURNBULL. M. D.,
Of Philadelphia.

(*Continued from page* 699.)

"*Three Cases of Restoration of the Eyelid by Transplantation of a Flap Without a Pedicle*" were reported by Charles Bull, M. D., of New York, and "*A Successful Case of Skin-flap Transplantation Without Pedicle to Lower Lid After Removal of an Epithelioma*," is instructively reported by B. E. Fryer, M. D., of Kansas City, Missouri. He says: "Successful cases of transplantation of skin-flaps from distant parts, without pedicle, have been sufficiently numerous to give the operation a permanent place both in ophthalmic and general surgery. Those who have done the operation in the last few years have not always followed Wolfe, who originated it, either in the operative procedure proper, or in the dressing afterwards; and it would seem that especially a simpler and probably a more effective dressing than Wolfe's, as far as the retention of the flap is considered, has been sought by later operators;" and Fryer makes the point that "his dressing was increased, it is believed, in its retentive power and simplicity, and lessened in part of its quantity, and the patient, therefore, was relieved of some of the irksomeness."

*A Case of Gangrene of the Lids, with Subsequent Restoration of Tissue without Plastic Operation*, is described by Richard H. Derby, M. D., New York, who says: "It seems to me that in connection with the papers which have been read on Wolfe's operation, my case is not without interest, illustrating, as it does, how efficiently nature herself replaces lost tissue without the assistance of the surgeon's knife."

A unique and interesting *Case of Hysterical Monocular Blindness, with Violent Blepharospasm and Mydriasis—All Relieved by Mental Impression*—is described in detail by George C. Harlan, M. D., of Philadelphia.

L. D——, sixteen years of age, first came under my observation September 24, 1883, at the Throat Department of the Philadelphia Polyclinic, under the charge of Dr. S. Solis-Cohen, where she applied for relief of distressing symptoms caused by the development of a fungus growth upon the tonsillar mucous membrane.

Having been thus initiated in the charms of medical treatment, she was, on December 26, on account of the development of various nervous symptoms, referred to the Nervous Department under Dr. Mills, who has furnished me with the following record of the case: "She was taken sick last September with sore throat, and was confined to the house for about two weeks. She was very weak during this attack. Dr. Cohen attended her, and there was some doubt about the throat difficulty being diphtheria, but this throat trouble was followed by difficulty in swallowing and regurgitation of food through the nose. At the same time there was noticed a gradual weakness of sight in the right eye. After these troubles had somewhat lessened, huskiness of the voice came on, and was soon followed by complete loss of the voice," etc.

*Neuro-Retinitis, with almost Sudden Loss of Sight in Both Eyes*, is graphically treated by H. Knapp, M. D., of New York, who cites two cases.

"During the last year two cases of almost sudden loss of sight in both eyes, with the picture of optic neuritis, came under my observation. In the one the blindness remained permanent, with the exception of a small island in the visual field of the right eye; in the other case, sight was perfectly restored in both eyes. The blindness in both cases was binocular and absolute, with complete immobility of the pupils on changes of light, in the first case for several months, in the second for three days. There is nothing very unusual in the recovery of sight after neuro-retinitis from meningitis and other diseases, much less unusual is the permanence of blindness after neuro-retinitis; but total blindness occurring in the course of several hours, being accompanied by nothing but choked disc—constitutional diseases, such as albuminuria, diabetes, syphilis and the like, being absent—is certainly very rare. In my own practice I do not, at this moment, recollect any other cases, and the literature on the subject is so meagre that the communication of the cases mentioned may not be without interest to the members of this Society and the readers of our Transactions." The cases are well worth a careful reading by those interested.

A carefully-written paper, and one worked out in the German style of thoroughness, treats of *Hereditary Atrophy of the Optic Nerves*. By W. F. Norris, M. D., of Philadelphia. N. says:

"Since I presented to the Society, in 1881, a paper describing the history of a family in which atrophy of the optic nerves was hereditary, and of which two members submitted themselves to me for examination, I have again encountered another group of individuals exhibiting this remarkable affection: a family of seven children, all of whom, as well as their parents, I had an opportunity of carefully examining. Every child was affected, while the parents had perfectly healthy eyes. According to their intelligent account of the affection, it extended back on the mother's side; the disease attacking the great grandmother, a grand-uncle, two uncles, and several cousins. It is unusual to have an opportunity to study such a group of cases at various ages and in various stages of the disease, thus enabling us better to appreciate the progress of the malady. It is well known amongst breeders of animals, that the phenomenon of atavism, or the transmission of qualities of a progenitor which first develop in the second generation, is frequent. We, as students of diseases of the eyes, occasionally have an opportunity of witnessing the same law in the inheritance of perverted nutrition of the tissues of these organs. Our most frequent opportunity of studying transmitted disease is, however, undoubtedly where the transmission is direct from parent to offspring, as in the case of that form of interstitial keratitis due to hereditary syphilis. Here, as well known, the disease usually remains limited to the cornea, although it may secondarily invade adjacent tissues. This we can readily understand, when we consider the peculiar anatomical construction of the diseased tissues, so different from that of the contiguous structures. We cannot, however, so easily comprehend why certain delicate nerve-fibres of the optic nerve and retina,

which are in a state of œdematous swelling with proliferation of the surrounding connective tissue, should for so long a period of years exhibit such well marked pathological changes, notwithstanding that the adjacent fibres, which have a common anatomical structure as well as a common lymph (and blood) supply, remain comparatively unaffected. Are we to consider that these pathological phenomena are a manifestation of a local force treasured up in the cells of the tissue itself, or of perverted energy lurking in the distant but corresponding cells of the central nervous system? The manifestations of the disease under consideration begin with the formation of central scotomata, first for color only, so slight that the different hues, though dimmed in intensity, are still readily recognized. The defect gradually progresses until a complete scotoma both for form and light is developed. The peripheral parts of the retina are affected later, and when they are involved, often lose to a marked degree their sensibility to color, but rarely to form and light. Although the patient is debarred by reason of his loss of macular vision and his color-blindness from most useful and remunerative occupations, he still retains sufficient peripheral sight to guide himself and to do a certain amount of coarse work." Then follows the clinical histories of those of the family coming under his immediate supervision.

*Jequirity Ophthalmia* is again stirred up by Jos. A. Andrews, M. D., New York, who, from experience, warns us not to play with explosives. He commences: "Having quite recently considered, at some length, the subject of jequirity ophthalmia, I desire here to limit my remarks to a brief review of certain papers that have appeared on the subject in question since my own communication alluded to above was published.

"First, is jequirity directly responsible for the disastrous results which have been placed on record as having followed its use?

"However, if we compare the number of authors who have declared themselves for or against the jequirity treatment, we find that the former are conspicuously predominant, and it would seem that those authors who do not favor the remedy, such as Vossius, Galezowski, and Nicolini, might change their views if their experiences were extended to a larger number of selected cases.

"Scrofulous pannus, sclerosis of the cornea, are favorably influenced by jequirity, and I have had very gratifying results in this class of cases in improving the vision; but I have never used the remedy, as DeWecker has, in torpid ulcers of the cornea—firstly, because I could not satisfy myself that the cornea was not placed in still greater danger by its use; and secondly, I felt that I could rely on safer and really satisfactory means. However, of course, mere conjecture should not be permitted to weigh against the results of experience, and DeWecker's experience seems to speak in favor of the remedy in this class of cases."

We would urge upon those who might be tempted to use the infusion of the jequirity bean, in any given case, to make themselves familiar as to the proper sort of cases in which to start a jequirity ophthalmia, and to the precise strength and mode of application of the infusion used as well. Having considered their reputations at stake, they are then to proceed with extreme caution.

(*To be continued.*)

## News and Miscellany.

### Pennsylvania State Medical Society.

The thirty-sixth annual session of the Medical Society of the State of Pennsylvania convened at the Court House in Scranton, May 27. Dr. Everhart delivered the address of welcome, on behalf of the medical fraternity, and in doing so referred to the city of Scranton as the third in the State, and the largest in the Union of its age. The address was delivered in an extemporaneous manner, and though not lengthy abounded in well-rounded periods. Dr. Everhart then announced the programme to be observed during the week outside of the convention.

Judge Hand delivered the following address:

GENTLEMEN: You have been cordially welcomed by your own fraternity. It has been assigned to me to extend a like cordial welcome from the county at large. Our generous and faithful County Commissioners have opened wide the doors of these halls of justice for your entrance, and bid you take possession at your will. They join with us also in this expression of the general welcome. We are all glad to see you, and feel honored that you have come to this youngest of the counties and this third city of the Commonwealth to hold your deliberations. You will find us alive to all that is good in the healing art. If you take the trouble to investigate you will find that in activity, wealth, good order, obedience to law, harmony among ourselves, a growing sense of the high obligations resting upon us to make the most for republican institutions and government, in rapidity of growth in population, public works, schools and churches, we are second to very few, if any, of the counties of this noble Commonwealth. We are aware that with the intermingling of so many nationalities and interests, occasion, not cause, has been given for slanderous reports about us in some parts of the State, but we are too busy and too philosophical

to answer these, knowing that in due time they will answer themselves. But such as we are, with our virtues and our vices upon us, we welcome you all. Our farmers from Benton, Greenfield and Fell townships on the north, to Clifton and Buck on the south, our miners, artisans, merchants, laborers, clergymen, lawyers, ladies—the old and the young, the rich and the poor—all welcome you heartily. We invite you to our homes, our workshops, our factories, our hospitals. The signs "no admission except on business" are all down to-day for the doctors. We trust you will have a good time while with us, will regret when you leave, and will desire to come again. We welcome you first of all because we are glad to see you. Secondly, because of your self-sacrificing devotion to your profession and humanity. Few martyrs are found in this age except in the medical profession. Thirdly, we welcome you because we are too smart not to do so; a lively sense of our own interests and dependence induces us always to be on the right side of the doctors. A man must never quarrel with his doctor nor his cook. To meet the doctor when we need him is a comfort; to meet him when we do not need him is a pleasure; but the moment of supreme happiness (to the lawyer at least) is to meet him when the doctor needs the lawyer. Feelings, as it were, are reversed then, you know. You have, in your order of exercises, honored the two professions of theology and law. You recognize the old term, "the three learned professions." The disciples of Coke and Littleton are glad to acknowledge this courtesy from the disciples of Æsculapius. While the three professions differ in some particulars, there is after all something of a similarity in our aims. Theology mipht be defined, the science which contemplates the eternal union of soul and body. Medicine, the science which postpones their separation to the longest possible period. Law, the science which, while the soul and body are in conscious union, averts the beginnings of schism both in the individual and the body politic. We are each willing, metaphorically speaking, to look after the health of our neighbor. One the health of the body, one the health of the soul, the other a healthy maintenance of individual and public rights—the demand of both soul and body. We all agree in our appreciation of a proper fee. We all are expected, like the grand juror, to keep, if not the Commenwealth's counsel, our fellows' and our own secret. It is a grand work we are all engaged in, to know the body, the soul, human rights, to gather this knowledge for the behefit of the human race, and pass it on increased and purified to the oncoming generations. Distinctions are sometimes invidious: nevertheless, we of the legal profession must admit that you have some honors that we cannot attain unto. As a profession, you share with the soldier on the battle-field, honor, glory, and self-sacrifice at the call of patriotism. In the investigations of science as related to the healing art, you have pushed zeal so as to add to the permanent useful knowledge of the world. In these fields you have honored names that shall live through all time. The Divine Teacher did not call himself a preacher; he repudiated the title of judge on the earth; he called himself a physician. We have some common difficulties. In the legal profession we find men will not circumvent the law according to rule. A clear old-fashioned larceny or trespass we can understand and apply the law, but when it is toned down or up and we have a case with a little honesty, some shrewdness, one eye sharp on the law, an undercurrent of overreaching and selfishness, and a claim of charity, we have a mixture that taxes all our intellect and puzzles "the Philadelphia lawyer" to give it a name. I suppose a clear case of measles or typhoid fever you can understand, but when men will repudiate all old-fashioned rules of diagnosis, mix up the nerves, the blood and the tissues in one complication of disorder, then terms and medicine and skill are all put to the puzzle. We have some advantages over you. When a man has forfeited all claim to life, it is the prerogative of the law alone to put an end to it. We have this both by divine and human authority. We do it by a process not laid down, I presume, in your books as a disease. If so, it is a disease for which society is not interested to find a cure except through moral influences, to prevent the first cause. We intend to always execute this part of our duty so there shall be no mistake as to the cause of death. We then turn the corpus over to the doctors, to find out if possible why the man lived. You have some advantages over us. Our (legal) mistakes, if any, are spread upon the public record or hung high before the world; your mistakes are either in Latin or in the ground. We congratulate you, gentlemen, on the grand success of your profession, on the honor Pennsylvania has derived from your celebrated skill. No State, and I believe no country, can furnish a better record for skill, devotion to scientific inquiry, than the Keystone State; and none to-day are challenging the world more to faithful investigation and skillful experiment for the good of mankind than the physicians and surgeons of this Commonwealth. Your meeting to-day in this high and honorable intercourse is a guaranty that this investigation is never to cease, but is to bring even grander results in all the future. We wish you pleasure in your deliberations, and that their outcome may be, as we have no doubt it will be, pleasure to yourselves and profit to all mankind.

After the transaction of routine business, Dr. S. S. Schultz, of Danville, delivered the

ADDRESS ON MENTAL DISORDERS,

choosing for his subject the reason for that specialty in medicine concerned with the treatment of insanity, found primarily in the peculiar functions of the diseased brain, whose disturbance is followed often by erratic and dangerous conduct.

He said that this requires some such control as is afforded by an insane hospital. The purpose of the address, however, is rather to bring out analogies than contrasts.

His paper included definitions of insanity. Their lack of uniformity, due chiefly to the unlike experiments and characters of those who make them. Insanity not properly a disease, but a combination of symptoms like diarrhœa, dyspepsia; these symptoms the result of disorder in the instrument, the brain, through which the mind acts. These disorders may be of many kinds—the laws which govern them are the same

which govern diseases in other parts of the body; their nature, course, treatment and results therefore the same.

After which Dr. Charles S. Turnbull delivered the

ADDRESS ON OTOLOGY.

His aim was to say, tersely, all that might be of use to the busy practitioner, and he considered this special branch of surgery practically and in a general way, and described what he termed "a new departure in local aural therapeutics."

He said that his experience had taught him that, in the treatment of most cases of disease of the ear, any lack of success was due more to sins of commission than to those of omission.

This was especially the case in the ear diseases of childhood. He deprecated syringing, and the use of water in any way in connection with the cleansing of the external auditory meatus. He urged parents to cease their efforts to cleanse children's ears by the use of soap and water, twisted-up corners of wet towels, handkerchiefs, and wash-rags, and told how useless the little instrument called the "Aurilave" is to the user, and how beneficial, pecuniarily, to the aural surgeon; mentioning some of the dangers accompanying the wearing of ear-rings, proving by logical reasons the force of his objections. The address was virtually a short lecture in practical otology, with hints on the hygiene of the ear.

The points, to be appreciated, call for a reading of the paper in toto, as his advice, being the result of years of careful observation, should be of marked and special value.

One especially valuable hint to mothers, as well as to those who are to advise them, is that concerning the rearing of young children, whose noses are usually allowed to take care of themselves.

Every child should be taught to blow its nose. If it has not been or cannot be taught to free the nostrils of mucus, its chances for retaining hearing power in case of acute or sub-acute disease of the middle ear are much poorer than in the case of one who has learned to blow its nose. Handicapped by being unable thus to free its nostrils, a child cannot possibly inflate the tympanum or middle ear, and clear the Eustachian tubes, so that the dread exanthemata must, as a rule, mean deafness.

Forcible dilatation, by Politzer's method, is generally sufficient in the case of adults, but will not answer for children, who only become demoralized and terrified by the presence of any one who has been so injudicious as to attempt its use.

For children, Dr. Turnbull recommends his own method, which he describes as follows: one nozzle of an ordinary auscultation tube is protected by a perforated "lead-pencil rubber cap" slipped upside down over it. This is called the nose-piece, and can be held firmly, as it plugs one nostril and acts as a point of support upon which to close the other. As the child cries lustily or else blows out (as if to blow out a light), the surgeon, having the nozzle at the other end of the tube in his mouth, blows a quick, short blast, which invariably inflates both ears. Once assured that the procedure does not cause them pain, children enter into the spirit of it and blow with a will.

The great secret in the successful treatment of all discharges from the ears is dependent upon the fact that fermentation and putrefaction soon occur in the moist auditory meatus. So long as a discharge is not allowed to ferment it will not become fetid, seldom even purulent.

Eczema (otitis), externa eczematosa of the auricle, and external auditory meatus, whether in a child or in an adult, is generally a disease of neglect or injudicious interference. In children it is apt to be the former cause; in adults the latter; but it is usually induced by the use of soap; in adults it is generally caused by meddlesome attempts at ablution. In children, eczema readily yields to treatment, providing soap and water be left out of the question, while in adults it is more persistent and stubborn, recurring monthly, perhaps, for several years. Mild cases yield to the constant application of a weak mercurial ointment, while chronic cases require the application of a saturated solution of nitrate of silver.

Boric acid, if properly used, *as an impalpable powder*, still holds its own as a specific for chronic otorrhœa, and not for acute otorrhœa (except when the discharge is *fetid*).

This latter class of cases calls for an "aqueous boracic acid solution."*

For the army of those unfortunate beings suffering from deafness and roaring in the ears, and classified under the head of plastic (cicatricial) inflammation of the middle ear, all treatment still remains unsatisfactorily experimental. Instrumental interference, such as the use of the eustachian catheter, or bougie, the forcible introduction of vapors, etc., except in the hands of an expert, Dr. Turnbull considers meddlesome, as well as useless. Where Valsalva's or Politzer's method cannot be made available, further interference is apt to be harmful.

In the treatment of "tinnitus aurium" the different preparations of the erythroxylon coca are to be especially lauded, not only because of their direct local effect on the throat and rhinopharynx, but also for their anæsthetic effect on the mucous membranes generally. In this connection, hydrobromic acid in conjunction with bromide of sodium is not to be forgotten, especially in cases of tinnitus due to disorders of cerebral circulation, dependent upon nervous irritation.

Diseases of the internal ear characterized by profound deafness and a peculiar form of tinnitus (sharp, shrill, ringing sounds), are usually caused by specific disease or traumatism, and seldom yield to treatment. Those of syphilitic origin which might have yielded to a full specific course, are generally of such long-standing that little else is left to be done other than to make a diagnosis.

Dr. Turnbull called especial attention to a disease (not unlike boiler-maker's deafness) which he styles "mill-operatives' deafness." This is a disease of the auditory nerve, caused by a prolonged succession of concussions (erschutterung) and irritation from the rattle and din of the machinery. The first grave and characteristic symptom of which is that known as "paracousis Willi-

*Trans. Penna. State Med. Society, 1882, p. 189.

sii," or the power of being able to hear distinctly only when in a noise.

In conclusion, he urges practitioners who are unable to obtain the immediate aid of a specialist, not to prescribe on a venture, but to be persuaded to simply illuminate the external auditory canal with a concave mirror, and search for the cause of deafness. Impacted or inspissated cerumen can always be safely removed by syringing with warm water, which procedure is the only one in which the use of water is permissible; even here, however, had water not been injudiciously used in the first place the wax would not have become packed.

Dr. Edward Jackson, of Philadelphia, then followed with a paper on

THE DIAGNOSIS OF INCIPIENT CATARACT.

Saying: Cataract, though perfectly amenable to treatment, is still one of the most dreaded diseases of the eye. This is mainly because it is blamed for the effects of other lesions. This would be largely avoided if practitioners of medicine were generally more skillful in its diagnosis. Subjective symptoms are of little importance, except as they point to other affections complicating cataract. In this connection it should always be borne in mind that the uncomplicated advance of cataract is always absolutely painless. The results of examination of the pupil by oblique illumination are often inconclusive or unreliable. The best way to detect partial opacity of the crystalline is to throw into the eye the light from an ophthalmoscope mirror; and then to look at the general red glare obtained from the back part of the eye. In doing this the surgeon looks through the suspected lens, and all opaque portions become noticeable as black spots, lines or patches, in the red circle of the pupil. For such an examination no costly ophthalmoscope is needed. Any piece of looking-glass, with a hole scraped in the silvering for the observer to look through, suffices perfectly.

But when lens opacity has been recognized, the diagnosis of cataract is only just begun. The practical question is: does the lens opacity cause the symptoms complained of? Incipient cataract might be present and cause no inconvenience whatever. On the other hand when cataract exists, other lesions of the eye, nerve atrophy, choroiditis, or ametropia are very apt to be present. The complete diagnosis of cataract demands ability to recognize all conditions that may impair vision, with the judgment and information necessary to assign to each its proper share in the causation of the patient's symptoms. The best measure of the extent to which lens opacity interferes with the patient's seeing is the extent to which it interferes with the surgeon's inspection of the optic disk and retinal vessels of the affected eye.

Following which Dr. F. D. Castle, of Philadelphia, read a paper on

SOME POINTS IN OPHTHALMOLOGY WHICH MAY BE OF INTEREST TO THE PHYSICIAN IN GENERAL PRACTICE,

In which the author calls attention to some points in ophthalmology which may be of interest to physicians engaged in general practice. The first is, how to determine whether a case of blindness or defective vision is due to cataract or not, if the appearance of the pupil is such as to warrant the belief that the lens is opaque.

After alluding to the fact that it has not so infrequently happened that a case has been diagnosticated as cataract simply in consequence of a somewhat greyish appearance of the pupil, in which the lens was not at all or only to a slight extent opaque, and, even in the latter case, not sufficiently so to explain the serious defect of vision existing, the author urges the advisability of one always being sure of our diagnosis in cases in which there seems to be grounds, in the appearance of the pupil, for pronouncing the defective vision to be the result of cataract. If the patient is told that he has cataract, which all the world knows to be curable by operation, and it should turn out that the case was one in which the greyish appearance of the pupil was only deceptive, and the mischief causing the defective vision was seated farther back, in the fundus of the eye, and perhaps of an incurable character, the patient's disappointment would be great, and the reputation of the physician who called the case one of cataract would not be benefited. Such mistakes can positively be avoided by a careful examination, and this examination does not necessitate the use of the ophthalmoscope, the skillful use of which will always, in all probability, remain confined to the ophthalmic surgeon for the most part, as the art of using the instrument must first be acquired, and practice is necessary to maintain the skill that has been gained in its employment. In the examination just alluded to, particular attention must be paid to the following three points in every case in which cataract is suspected, but the appearance of the pupil is not so strikingly opaque as to leave no room for doubt. The first of these points is simply a recognition of the fact, that in old age the pupil loses often the deep jetty black hue which it has in early life. A slightly greyish shimmer is, therefore, scarcely to be considered as an abnormality in the pupils of old people. If, in a case of this kind, focal illumination be employed, *i. e.*, if the rays from a gas-burner in a darkened room be condensed by a strong convex lens in such a way that the apex of the cone of light thus formed falls upon the pupil, so intense a greyish reflex will stream from the pupil, that an uninitiated person might consider the diagnosis of cataract as confirmed, although no centricular opacity whatever exists.

The second point (and a very important one) has reference to the perception of light. The blindness in cataract is more absolute. A person blind from cataract only, the other parts of the eye being healthy and the cataract ripe, should be able to perceive the light of a candle in a darkened room at a distance of twelve feet. The field of vision, as tested by moving a candle round in front of the eye, should also be free. The author adduces a case which had been pronounced cataract, in which the pupil appeared somewhat greyish, but perception of light was absolutely wanting. If the light perception had been tested in this case, the faulty diagnosis would not have been made.

The third point involved in the examination of

the lens, has reference to the importance of the image of a flame formed by the posterior capsule of the lens. The author shows how to produce and recognize the images of the cornea and posterior capsule. In the case of a ripe cataract it will be, of course, impossible to produce the image of the posterior capsule, as the opaque lens substance, in front of the latter, will prevent the penetration of the light rays. In a case of partial cataract, the image of the posterior capsule may be visible in some portions of the area of the pupil, but not in this. In case the lens is very slightly but differently clouded, the image of the posterior capsule may be indistinctly visible, its edges being blurred and ill-defined, however, and not sharp as under normal conditions.

The second point considered in this paper, is the probable diagnosis of cases of eye-strain, i. e., cases in which the symptoms may be relieved by the adaptation of suitable glasses. The author discusses the symptoms which are more or less common to all cases of eye-strain, whether dependent upon hypermetropia, astigmatism, myopia, etc., by paying attention to which the general practitioner will recognize the character of the trouble at a glance, with the same facility as the specialist.

The third and last subject of discussion in the paper, is the necessity for the early recognition of acute glaucoma, and the avoidance of the use of atropia in any such case. It has occasionally happened that physicians, not at once differentiating acute glaucoma from other inflammatory affections of the eye-ball, and acting on the general principle, that atropia is of service in many inflammations of the globe, have used this drug as a palliative when under the circumstances a speedy operation was indicated, and should have been employed, if it were thought desirable to use "eye-drops" at all. If the physician is at all doubtful about the diagnosis, he should employ agencies of which he is certain that they cannot by any possibility do any harm (until competent assistance is obtained), used as warm or cold compresses, as may be most grateful to the patient, leeches to the temple if the eye is very red and there is great pain, morphia, etc. As mydriatics may excite an attack of glaucoma in an eye which has a predisposition for it, it is evident that they should not be used when the eye has been attacked by the disease.

Dr. E. T. Bruen, Assistant Professor Physical Diagnosis, University of Pennsylvania, delivered the Address in Medicine, of which the following is an abstract:

The address in medicine was doubtless originally intended to present a comprehensive summary of the annual progress of advancing investigation. At this era, however, medical journalism has reached such a complete development, and abstracts and reviews have rendered us so familiar with the progress of medical thought, that it becomes a temptation to use the opportunity to present a monograph upon some subject which has been made the special study of the writer. However congenial or instructive such a plan, it seems to me more consistent that this paper should contain a résumé of the present status of thought upon the more important subjects which have excited general interest in the past year, while at the same time, some more purely personal observations may be submitted.

PATHOLOGY AND ETIOLOGY.

In tubercular disease it has been established that a micro-organism, the bacillus of tuberculosis, is constantly present. The inoculability of the tubercular material from pure cultures is also proven, and its casual importance is claimed by an increasing number of clinicians and pathologists. It is, however, a fact that healthy tissues can resist the inroads of the microbes and constitutional predisposition or acquired ill-health are a constant source of menace if the new etiology should prevail. But there also exist cases of abdominal tuberculosis without pulmonary lesion and even cases of cheesy deposit in the lungs in which the bacillus is not present, however careful the search. These cases radiate foci of infection through the lymphatic channels, and in this manner differ from a case of tubercular matter in which a bacillus exists, for in the latter case the entire system may be involved. There also exist the forms of interstitial phthisis known as pneumonikomosis or artisans' phthisis, in which the appearances are often very similar to the admittedly tubercular forms, but which are minus the bacillus.

Allusion was also made to Professor Hamilton's researches into the anatomy of the bronchial mucous membrane as illustrating pathological basis for the chronic character of many forms of bronchitis.

A very brief allusion was made to the subject of cholera, owing to the scope of the subject and the fact of its presentation by an able hand the same afternoon. The opinion of its communicability by means of fluid media was warmly supported as proven by modern research—the same argument applying as is used to explain the spread of diphtheria, which is a disease known to be communicable by fluid media as well as directly from individual to individual. Koch seems to have demonstrated a specific bacillus. The same demonstration of a specific microbic poison is sought by some for diphtheria; possibly in both cases, the exact poison is yet to be discovered.

The propriety of boiling the drinking water is unquestionable, and certain disinfectants lessen the active force of the virus, as corrosive sublimate or the sulphate of copper. The free use of water in sewers, the burning of the dejecta, was recommended.

*Albuminuria.*—The importance of high arterial tension, when continuous, cannot be overestimated, since Bright's disease has for its aspects the renal and the cardio-vascular. The views of the late Dr. Mahomed upon this subject were cited, viz: that acute or chronic blood poisoning forms the first step in the process, this is followed by an increased arterial pressure, and consequently by functional hyperæmia of the kidney, this being the chief excretory organ of the body. When high arterial tension is inaugurated, a chill, constipation, or an excessive amount of the poison may increase the hyperæmia to a more severe inflammation, and this gives rise to albuminuria.

When the change is more chronic, albuminuria may be only occasionally present, and that in small amounts, but cardio-vascular changes produced by high arterial tension develop, and the vessels thicken.

Albuminuria may also occur by changes advancing too rapidly in the capsules, until they strangle the vessels they contain, or the outer-lobular changes may be considerable, and bring about a like result by compressing the tubular plexus.

The real diagnostic question was in each case, not is there albuminuria, but is the kidney doing well its functional work of elimination, and the study of the heterogeneous elements of the renal secretion by the sp. gr., or quantitative analysis, is supremely important.

The duration of cases of Bright's disease was considered as really much longer than is customarily thought, but no albuminuria can be physiological if persistent.

The causes of albuminuria not due to serious renal mischief, were thought to coincide with the times of increased fulness of blood in the kidney, which is produced by general causes, such as effects of food and fasting, of upright posture as compared with the horizontal, the warmth of bed versus exposure of the surface, of exercise versus rest. Nervous forms of albuminuria may occur in young adults at puberty, due to excessive irritation of the genito-spinal center, with reflex cerebro-spinal symptoms. The common association of albuminuria with cases of ophthalmia is more frequently vaso-motor than due to renal disease, and Granville has shown that albuminuria can occur in elderly, but intensely nervous persons, the focus of irritation residing either within the cranium, or at the cilio-spinal axis. Cystitis or gout may give rise to forms of albuminuria, and Granville was quoted as showing that there is no reason why, under the influence of nervous depression and vaso-motor disturbance. the kidneys should not become œdematous in the same manner as an hysterial point.

In testing for albumen, a preference was expressed for the heat with nitric acid and the picric acid tests.

The former will detect one part of albumen in from 6000 to 7000 parts of urine. Ferro-granule of potassium, and acidulated brine in from 6000 to 7000 parts of urine. Potassium, mercuric iodide, picric acid and sodium, tungstate in 20,000 parts of urine. The picric acid test was discussed at length, and methods of avoiding error described.

Peptonuria received a passing notice.

PULMONARY SURGERY.

A review of the subject of the operative management of pulmonary cavities was discussed, and its proper scope defined. The recognition of pneumothorax was stated as being much simplified by using a silver dollar as a plexor and plegimeter, and then noting the clear metallic sound produced. This sign vanishes if an external fistula is produced, or the internal opening is closed.

Some personal views were expressed as to the diagnosis of friction. Over the pericardium, viz: (*a*) They were synchronous with the movements, rather than the sounds of the heart. (*b*) They were superficial sounds, often accompanied by a fremitus. (*c*) Change of posture induces an increase of murmur. (*d*) The alterations common to the walls of the heart in endocardial disease were absent. The above were usually noted, but especial importance was laid upon the location of maximum intensity of a murmur in pericarditis, which does not correspond with a valve point. The pericardial murmurs also change their focus of maximum intensity very often.

THERAPEUTICS.

In alluding to antipyrine it was described as undoubtedly efficient as an agent to reduce the temperature, which continued to fall for about six hours after the exhibition of one or two doses of antipyrine. The objection to its use was the profuse exhausting perspirations to which it gives rise, and it also produced a depressing effect upon the heart, though the latter is less than the depressant effect produced by others of the carbolic acid series. The usual dose employed by the speaker was ten grains as the strength of antipyrine, about twice that of quinine. Nitro-glycerine had been found valuable in lessening albuminuria associated with increased arterial tension, but its use must be watched, since it is possible that the reduction of arterial tension may be so great as to impair the cardiac power so essential to perfect circulation in renal processes; and thus albuminuria from feeble circulation would occur. Nitro-glycerine was also considered as very useful in renal asthma. Caffeine was a safe cardiac stimulant and diuretic. It was capable of increasing the force of the heart's action. One does not bring about a slowing of the pulse. The dose should range between 8–12 grains daily. A peculiar fanciful delirium like that produced by excessive amounts of belladonna, was described as an occasional symptom when caffeine had been used continuously; the mental equilibrium is speedily restored when the use of the drug is suspended. Reference was made to the use of hyoscine. It had been shown by Dr. H. C. Wood, of Philadelphia, to be a safe cerebral and spinal sedative. The dose was about $\frac{1}{100}$ of a grain. The virtues of cocaine were commented upon.

The address closed with some observations on dosage, and the possible effects of small doses long continued, especially when remedies had been used as alteratives or tonics.

DERMATITIS MEDICAMENTOSA—ERUPTIONS DUE TO THE INGESTION OF DRUGS,

Was the title of a paper by Arthur Van Harlingen, M. D., of Philadelphia, who said that most of our knowledge regarding the action of drugs upon the skin has been obtained during the past decade. It has been known for many years that iodine and bromine, with their compounds, will, in many persons, produce an eruption. But of late years, not only have new and severe eruptions due to these drugs been described, but eruptions due to various other drugs, as arsenic, belladonna, chloral, digitalis, iodoform, mercury, opium, quinine, salicylic acid, tar and its preparations, etc., have been observed.

Most of the eruptions due to drugs resemble erythema, urticaria, measles, scarlet fever, and other exanthemata. They are distinguished by some anomaly in their mode of onset, the parts attacked, etc, while, of course, the history of ingestion of any of these drugs aids the diagnosis greatly. Certain drugs produce purpuric eruptions, and iodine and bromine in addition to the well-known acne-form eruption, sometimes give

rise to confluent pustule-like eruptions of a threatening appearance, resembling the eruptions of syphilis.

SOAPS, ESPECIALLY MEDICATED, IN DISEASES OF THE SKIN,

Was the title of a paper read by Dr. John V. Shoemaker, of Philadelphia.

The writer first discussed in his paper at some length the use of soap in health and disease, after which medicated soaps in disease were carefully considered. It was pointed out that both potash and soda soaps can be combined with various chemical substances to form medicated soaps, that may be either of the soft or hard variety. Soap so prepared was shown to be an easy and convenient vehicle for cutaneous application.

The value of potash soap medicated with tar, naphthol, carbolic acid, salicylic acid, sulphur, balsam of Peru, mercury, and other substances, was next cited. The writer finally added that soda soap, medicated, has even a more extensive use in the treatment of diseases of the skin than potash soap, into which certain drugs have been introduced. Soda soap can be medicated with a variety of substances that can also be conveniently and easily brought in contact with the diseased surface. It is not only a useful and cleanly vehicle for applying medicine, but it also rids the skin of all abnormal products, removes the epidermis in a mild way, exposing the sensitive skin, which is due to the action of the alkali and the drug or drugs in the combination. Soda, like potash soap, should always be employed on a diseased surface with precaution, especially in beginning its use, whether it be the ordinary or medicated variety. Its effect should always be tried on a small spot, and if acceptable, it can be used over the entire diseased surface. In some diseases a marked and beneficial effect will follow its application, and by its repeated employment it will readily be apparent how frequently it should be used. Sometimes medicated soap is well borne every day, or once or twice a week. Occasionally its use once in two or three weeks is sufficient, or only as the occasion may require for carrying off the epidermis, stimulating the skin, or for the removal of irritating secretions or crusts, scales or extraneous matter. Again, it may happen in some cutaneous diseases that medicated or any form of soap is not well borne, or is absolutely contra-indicated by the abnormal condition of the skin. Attention to the precautions already alluded to, together with a general clinical knowledge of what is suitable or unsuitable to use from the change in the skin, should serve as a sufficient guide as to whether medicated soap should or should not be employed.

A variety of medicinal substances and combinations have been tested by me in soda soap for some years, both in private practice and in dispensary and hospital service, with the effect of producing the following medicated soaps, which have been found advantageous to employ, and which are manufacutured by W. T. Baker & Co., of Philadelphia, and are now largely used in the Philadelphia Hospital for Skin Diseases. Each soap referred to is divided into pieces or cakes that have an average weight of three and a half ounces, or 1,680 grains, and in speaking of the different varieties I shall give the medicinal substances with which each soap is incorporated:

*Alum Soap.*—Sapo aluminis, 10 per cent., or 168 grains alum (potassæ aluminis).

Alum soap is most useful to apply in hyperidrosis and seborrhœa oleosa, or in excessive sudoriferous and sebaceous secretion. It checks or assists in relieving the discharge that occurs in these affections, and often brings the diseased surface into a condition suitable for other remedies. Many cases of pustular eczema, particularly in the subacute stage, are benefited by its use. It frees the surface of crusts and scales, and aids in lessening the formation of pus. It is very efficient in all such indolent conditions of the integument as occur in lupus, cancer, and in scrofulous and syphilitic skin affections. Alum soap has both a stimulating and astringent action on ulcers, and will be found particularly good for bed-sores and all weakened conditions of the skin that follow the effects of illness, or any irritation that may arise from friction, especially that which occurs in the folds of the skin of stout persons, by giving strength and vigor to the skin.

*Arnica Soap.*—Sapo arnicæ, 10 per cent., or 168 grains extracti arnicæ.

Arnica soap is very good to use in sore nipples, and in many inflammatory affections around the mucous outlets of the body. It is likewise serviceable in cleansing boils, carbuncles, and many of the pustular skin affections. The irritable and sensitive conditions of the skin that may exist during the course of these diseases are by its use frequently relieved. Arnica soap is also an excellent application for abrasions, wounds and bruises of the integument; the sorenes or pain, if present, is usually lessened or removed.

*Boro-Glyceride Soap.*—Sapo boro-glyceriti, 10 p.c., or 168 grains, 50 per cent solution boro-glyceride.

Boro-glyceride soap is very useful for its beneficial action on the skin, being preferable to either borax or boracic acid soap. It possesses antiseptic and deodorant properties, and is particularly applicable for the destruction of minute organisms. It is valuable for cleansing wounds, ulcers, suppurating, sloughing, or gangrenous surfaces, lessening inflammation, and preventing the action of atmospheric germs. General and local pruritic conditions of the skin, especially pruritus that frequently affects the genital organs and the anus, are usually benefited and often relieved by its use. It is a valuable soap to employ in acne and in seborrhœa, freeing the surface in the latter disease of crusts or scales that may exist, opening up the orifices of the sebaceous follicles, and lessening the accumulation of the abundant secretions. The roughened, reddened, and irritable state of the skin that is at times present in the latter disease and in acne rosacea, is often removed by the use of this soap, and it may give a clear and healthy complexion.

*Camphor Soap.*—Sapo camphoræ, 10 per cent., or 168 grains camphoræ.

Camphor soap has primarily a stimulant, and at times an irritant action, which is succeeded by an anodyne effect. It is most frequently used for the relief of pruritus that attends eczema, chilblains, and other irritable affections of the skin.

*Carbolic Acid Soap.*—Sapo acidi carbolici, 5 per cent., or 84 grains acidi carbolici.

Carbolic acid soap has at first a stimulant action, followed usually by an anæsthetic effect. It has been largely employed for its antiseptic action in wounds, and all suppurating sores; the accompanying itching of the skin is often allayed by employing it. It is excellent for chronic eczema, psoriasis, and many other cutaneous diseases; but on account of its unpleasant and penetrating odor, many persons prefer naphthol and salicylic acid soaps.

*Chamomile Soap.*—Sapo anthemidis, 10 per cent., or 168 grains extracti anthemidis.

Chamomile soap is a mild stimulant and astringent, possessing an agreeable aromatic odor, and being very acceptable to many inflammatory affections. It is an excellent soap to use in intertrigo or chafing, and in dermatitis, seborrhœa, hyperidrosis, and bromidrosis, while it is particularly valuable both for its medicinal virtues and aromatic odor in all conditions of excessive secretion and ill-smelling sores. It is frequently rendered more effective by the addition of sulphur, according to the following combination:

*Chamomile and Sulphur Soap.*—Sapo anthemidis sulphurisque, 10 per cent., or 168 grains extracti anthemidis, 5 per cent., or 84 grains sulphuris loti.

Chamomile and sulphur soap possesses the properties of both remedies in the combination. In seborrhœa sicca on any part of the body, but more particularly on the scalp or portions covered with hair, it has a most decided effect in carrying off the scales and crusts from the surface. Loss of hair, that so frequently occurs from dandruff or seborrhœa sicca, may be relieved or checked by the use of this soap. The greasy, shining complexion, attended with numerous small elevations or pimples, a form of acne common to young women from either gastric or menstrual disorders, often yields to applications of it, and it assists in restoring the skin to its healthy transparent state.

*Eucalyptol Soap.*—Sapo eucalyptoli, 5 per cent., or 84 minims ol. eucalypti.

Eucalyptol soap has not only stimulating and astringent, but also balsamic qualities. It is, therefore, a useful disinfectant application to all foul smelling wounds and ulcers. In bromidrosis or fetid perspiration it is very efficacious.

*Naphthol Soap.*—Sapo naphtholi, 5 per cent., or 84 grains naphtholi.

Naphthol soap is one of the most effective and practical of all the medicated soaps. It is useful in very many cutaneous diseases, and especially so on account of being free from odor and having stimulating, astringent, and some anæsthetic effect upon the skin. Animal parasites on the skin or in the clothes are usually destroyed by its application. Lousiness, particularly the variety that infects the pubic or axillary regions, can be easily, cleanly, and quickly destroyed by naphthol soap, superseding the filthy mercurial ointment. Scabies or itch is sometimes also eradicated by it, as it is a valuable adjuvant in assisting the action of other remedies. The bite and sting of many insects and animals may often be cured or relieved by its use. It often acts well in eczema, especially the subacute and chronic variety, adding much to lessen the infiltration and itching that may torment the patient. Psoriasis, pityriasis, and ichthyosis are often benefited by it. It has decided antiseptic properties, and is, therefore, of great utility in all offensive discharges from the skin. Fetid perspiration is not only controlled, but often cured by its use.

*Salicylic Acid Soap.*—Sapo acidi salicylici, 4 per cent., or 67½ grains acidi salicylici.

Salicylic acid soap is excellent for its antiseptic action, and is by far superior to carbolic acid soap. Its freedom from the irritating quality and disagreeable odor of the latter soap, makes it preferable to it in every way. It is an admirable soap for toilet purposes, and has proved serviceable in those thickened conditions of the epidermis that occur in the plantar, palmar, and extensor surfaces. It assists in softening up the epidermis, and in making the skin more natural and pliable. Sycosis and pustular eczema are generally benefited by its use, particularly when the hair becomes matted together, and is accompanied with a fetid odor. It is likewise serviceable in fetid perspiration and all foul-smelling wounds or sores.

*Sublimate Soap.*—Sapo hydrargyri chloridi corrosivi, 1 per cent., or 16⅔ grains hydrargyri chloridi corrosivi.

Sublimate, or mercury soap, is no doubt better known by the former term, as the latter has, in the minds of many for whom it may be necessary to prescribe it, a bad signification. It is like carbolic acid, naphthol, and salicylic acid soaps, a valuable antiseptic. In truth, it may be preferred by many who now regard the corrosive chloride of mercury a better antiseptic than those already named, and it can be advantageously employed in the same class of affections. Sublimate soap may, however, be objected to for fear of producing salivation; but the risk with so small a quantity of mercury in the soap is extremely slight, and to the present time I have never seen this effect follow its use. It is a valuable soap in animal parasitic diseases, such as phtheiriasis or lousiness, scabies or itch, and for destroying insects of all varieties that may infest the body. Freckles, pigmentary deposits, especially chloasma, or yellowish-brown or blackish patches on the skin, are greatly relieved and sometimes removed by its employment. The red and roughened state of the skin that may follow the eruptive fevers, as in small-pox, may be erased or improved by its use. It is an effective soap to assist in overcoming an unhealthy state of the skin, and in producing a clear and brilliant complexion. Sublimate soap is also one of the best agents to have recourse to in all kinds of itching of the integument, and may afford the greatest relief sometimes in both pruritus ani and pruritus pudendi. It is, likewise, a markedly serviceable remedy in the various syphilitic skin eruptions.

*Tar Soap.*—Sapo picis liquidæ, 10 per cent., or 168 grains picis liquidæ.

Tar soap has long been employed with great advantage in many forms of cutaneous disease. Eczema and psoriasis, more especially the chronic varieties, are frequently much improved by the use of tar soap. It assists in keeping the skin active, often lessens the infiltration and relieves the itching. It is a useful soap also to remove the scales in pityriasis and ichthyosis. Tar soap or any of its compounds can be

employed in many diseases of the skin that have been referred to in considering naphthol soap—the former being inferior to the latter on account of its disagreeable odor, and the irritant effects that sometimes follow the application of tar to the skin.

The principal medicinal combinations with potash and soda soap have now been fully considered, and it simply remains to briefly refer to the following additional medicated ammonia and soda soaps which have rather a limited use:

*Amber Soap.*—Eau de luce. A liquid soap which has, as its chief ingredients, tincture of oil of amber and balsam of Gilead, with water of ammonia.

Used in enlarged glands, moles, warts, etc.

*Balsam Soap.*—5 per cent., or 84 grains balsami Peruviani.

Used in indolent ulcers, sinuses, abscesses, etc.

*Elder Flower Soap.*—Sapo sambuci florum, 10 per cent., or 168 grains sambuci florum.

Used in intertrigo, rosacea, sunburn, etc.

*Ergot Soap.*—Sapo ergotæ, 10 per cent., or 168 grains ext. ergotæ.

Used in eczema, acne, rosacea, etc.

*Glycerine Soap.*—Sapo glycerini, 15 per cent., or 252 grains glycerini.

Used for roughness of the skin, chaps, pityriasis, etc.

*Naphthol-Sulphur Soap.*—Sapo naphtholi sulphurisque, 3 per cent., or 50⅘ grains naphtholi; 10 per cent., or 168 grains sulphuris loti.

Used in scabies (itch), phtheiriasis (lousiness), insects of all kinds on the skin, eczema, psoriasis, seborrhœa, hyperidrosis, bromidrosis, etc.

*Sulphur Soap.*—Sapo sulphuris, 10 per cent., or 168 grains sulphuris loti.

Used in acne, rosacea, etc.

*Iodine Soap.*—Sapo iodi, 3 per cent., or 50⅘ grains iodi resublimati.

Used in syphilitic and scrofulous skin affections, old granulations, etc.

*Iodide of Sulphur Soap.*—Sapo sulphuris iodidi, 3 per cent., sulphuris iodidi 50⅘ grains in a cake.

Used in acne indurata, chronic ulcers, freckles, yellowish-brown or blackish patches on the skin, etc.

*Kino Soap.*—Sapo kino, 10 per cent., or 168 grains ext. kino.

Used in eczema, rosacea, ulcers, etc.

*Lead Soap.*—Sapo plumbi, 3 per cent., or 50⅘ grains plumbi acetatis.

Used in boils, carbuncles, abrasions, bed-sores, etc.

*Tannin Soap.*—Sapo acidi tannici, 3 per cent., or 50⅘ grains acidi tannici.

Used in seborrhœa oleosa, excessive sweating, ulcers, granulations, etc.

*Tannin-Balsam Soap.*—Sapo tanno-balsamicus, 2 per cent., or 33⅓ grains acidi tannici; 5 per cent., or 80 grains balsami Peruviani.

Used in wounds, ulcers, chilblains, etc.

*Thymol Soap.*—Sapo thymoli, 3 per cent., or 50⅘ grains thymoli crystallisati.

Used in ulcers, wounds, abscesses, sinuses, pustular eczema, etc.

*Turpentine Soap.*—Sapo terebinthinæ compositus.

This soap has been known as Starkey's, and is composed of equal parts of potassium carbonate, oil of turpentine, and Venice turpentine.

Used in chilblains, syphilis, psoriasis, etc.

*Wintergreen Soap.*—Sapo gaultheriæ, 3 per cent., or 50⅘ grains acidi methylsalicylici.

Used in eczema, psoriasis, lichen, acne, etc.

*Witch Hazel Soap.*—Sapo hamamelidis, 10 per cent., or 168 grains ext. hamamelidis.

Used in fetid perspiration, eczema, loss of hair, etc.

Soap, especially the medicated, as has been shown, is very often a valuable agent in the treatment of the various diseases of the skin, provided it is properly and judiciously used. It is a powerful remedy to do good, and equally so to effect harmful results. The greatest care and the utmost precautions, as has already been pointed out, should always be exercised in applying it to a diseased surface, and too much must not be expected for soap to accomplish. The manufacturer, the merchant, and too often the physician, claim that this or that medicated soap will remove or cure certain skin diseases, which on trial will frequently be found to utterly fail. They may sometimes so act, but, as has been stated, the contrary is usually the experience. Soap, therefore, as a remedy *per se*, seldom cures cutaneous affections, but as an adjuvant it is one of the most valuable agents that we possess. It is where too much has been hoped or expected from soap, either from hearsay knowledge, or from flaming advertisements that cause practitioners to try it, frequently alone, and being disappointed in the results, cast the soap aside, and lose what is often a most valuable adjuvant to other treatment.

Dr. Benjamin Lee read a paper entitled

"Nil Desperandum in Spinal Caries,"

Saying, there are two points that can never be too strongly insisted on in reference to the treatment of spinal caries or Pott's disease of the spine.

First. That it is *never too early* to begin with the employment of mechanical support of the most decided character; and second, that it is *never too late*.

First. It is never too early. The disease is a surgical one, and must be treated surgically. To tamper with it by attempting to treat it medically, by giving tonics and anodynes, is both a crime and a blunder; is as absurd as to try to treat a fracture of the thigh with Mrs. Winslow's soothing syrup.

The wearing of an artificial support, properly contrived, for a few months, can do the patient no harm if the spine is not diseased, but neglect on the part of the physician to advise a resort to this means of treatment when such disease is present, will lead to irreparable injury to the patient, and a loss of prestige to the physician himself. The story will be repeated from house to house, and from gossip to gossip, how Dr. Langsam allowed Mrs. Goodmother's daughter to go on for a year with spinal disease, and never found out what was the matter till she told him herself. It is perfectly easy to recognize the disease long before any deformity shows itself. The principal signs are: sudden attacks of cramping pains in the abdomen or sides, great stiffness on waking in the morning, and inability to stoop forward and touch the floor. There is not generally pain or tender-

ness in the back, and it is a great mistake to pronounce that there is nothing the matter with the spine because that symptom is absent. If the patient is able to walk, he will turn in one or both toes, and hold his shoulders back and up rigidly. If an infant, it will scream on being moved and lifted. The disease often follows an attack of whooping-cough, and can very often be traced to a fall or other injury. Secondly. It is *never too late* to begin with the use of mechanical supports.

It is the greatest possible error to suppose that strength is needed on the part of the patient in order to bear the application of a surgical appliance.

When the vital energies are slowly wasting away in consequence of a local source of irritation, the mechanical support is the plug which stops the leak. Without this, internal medication is as vain as the labors of the fifty daughters of King Danaus, condemned to expiate the awful crime of murdering their husbands on their nuptial night, by filling eternally with water a vessel full of holes.

The following case amply illustrates the truth which the author wished to convey.

S. R. J., a boy of six years old, was first seen by Dr. Lee, January 7th, 1884. He was suffering from spinal disease in the vertebræ of the neck, following whooping-cough two years before. The only treatment had been homœopathic globules given for supposed rheumatism. He was completely paralyzed from head to foot, was wasted almost to a skeleton, had racking cough, breathed with great difficulty, and had so rapid a pulse that it could scarcely be counted. He screamed with agony on the slightest movement, and every touch gave him pain. The application of the brace was a task of great difficulty on account of this extreme sensitiveness, but when it was once on, he experienced an immediate sense of relief. One week later he was eating and sleeping well, and could move the first two fingers of the right hand, and the little finger of the left hand. At the end of the second week he could move his toes, and put his hands above his head.

In three weeks more he had slight motion of the left leg. Two months from the time of the application of the support—which he wore night and day—he could hold up his head; and in three months more could walk alone.

Notwithstanding the formation of a large abscess in the neck, he has continued to improve in every respect up to the present time, and there is every reason to anticipate his entire recovery. This was simply one of the many cases which the doctor could cite to prove the truth of his second proposition, but one example would suffice.

OSTEOTOMY FOR THE CORRECTION OF DEFORMITIES OF THE LOWER EXTREMITIES,

was the title of a paper by Dr. H. R. Wharton, of Philadelphia.

Under the general remarks upon osteotomy, attention is directed to the two methods employed, the linear and cuneiform operation; and the preference is given to the former, where possible, as it consists in a simple section of the bone, and practically constitutes a subcutaneous operation, whereas the cuneiform operation, in which a wedge of bone is removed, necessitates an open wound with its attending dangers.

The use of the osteotome, or the saw, rests with the choice of individual operators. The importance of making a full correction at the time of operation is insisted upon, especially if a fixed dressing be afterwards employed.

Among the causes which produce deformities for which osteotomy may be required are those arising from rachitis, from coxalgia, from badly united fracture, or from unreduced dislocation, and of all these the vast majority of cases requiring operation are due to the first-named cause.

For the correction of angular deformities at the hip joint, resulting from coxalgia, Gant's modification of Adams' operation is preferred, that is, a section of the femur just below the lesser trochanter.

This operation is preferred, because a section of the bone at this point secures its division at a locality where its structure is comparatively healthy; whereas, its division through the diseased structures of the neck, if it still exists, is capable of renewing an active inflammation in tissues which are most susceptible to inflammatory accidents following traumatisms.

Also from the fact that shaft of the femur can no longer be influenced by the action of the psoas magnus and iliacus muscles, the chances of correcting deformity are less when the section is made at this situation.

Adams' saw has, in the author's experience, proved a most satisfactory instrument, although some operations speak with equal favor of the use of the osteotome in performingt hese sections.

The fact that no case has resulted fatally in a large number of cases in the author's experience, speaks well for the general safety of the operation. The results obtained, as regards the correction of the deformity, are most satisfactory. The various operations which have been devised for the correction of the deformity resulting from *genu valgum* are considered, and preference is given to MacEwen's operation. The ease of its performance—the fact that the section is made at some distance above the knee-joint, just above the epiphyseal line, so that the articular surfaces of the bone, and the ligaments can sustain no injury, and the satisfactory results as regards the correction of the deformity, are all circumstances which recommend it over the various other operations.

The various osteotomies for the deformity resulting from *anchylosis of the knee joint* are considered, and that devised by Mr. Borwell, a linear section of the femur just above the knee-joint combined with a setion of the tibia through its tubercle, has been found most efficient in correcting the deformity.

In *genu varum* a linear section of the tibia, fibula and femur with an osteotome at the point of greatest curvature, has been found a safe and efficient means of correcting the deformity.

In *tibial curves*, a linear osteotomy at the point of greatest curvature or in very aggravated cases, a number of linear osteotomies, or the removal of a wedge of bone may be required to produce the requisite straightening.

In employing the osteotome, the cutting edge of the instrument should be kept in such a position as to avoid injury to the subjacent structures.

The use of the plaster of Paris dressing to fix the parts after the operation, is strongly recommended.

Dr. W. D. Kearns, of Pittsburgh, read a paper on

"IMPROVEMENT IN SPLINTS,"

Saying, my invention relates to an improvement in splints for fracture of the forearm or wrist, especially for that kind known as "Colles" fracture; and it consists in providing the splint with a peculiar retroflexion, for the purpose of giving greater ease to the patient, and efficiency in causing the parts to knit and heal in proper shape.

In experience I have found that in many, if not most cases of fracture of the forearm or wrist, the splints should be applied so that the metacarpal phalanges of the hand may be bent upward from the plane of the arm at an angle of about one hundred and twenty-two degrees; and that it should be left as free to move as possible. This is about the natural inclination of the human hand, or that in which the posterior muscular tendons are most completely relaxed; and the continued maintenance of this relaxation of the several tendons, fasciæ, and ligaments, is of paramount importance in the class of fractures above noted.

It is the purpose of my invention to secure these points of advantage, and especially to effect a ready and comfortable maintenance of the required muscular relaxation of the extensors and flexors to their insertion along the phalanges, and of the muscles and fasciæ of the hand and thumb.

As will be readily understood by one skilled in the art of surgery, it is the form and flexion of the dorsal splint which governs the position of the hand, and when the retroflexion is of the angle before noticed, the hand will naturally assume this normal and easy position.

The purpose of the immediate flexion of the dorsal splint is to permit the proper backward bend of the hand and consequent relaxation of the posterior muscular tendons, without any tension or pressure on the carpal bones.

My improved splints may be applied to the arm by bandaging or in any of the well-known methods, and with or without interosseous pads to control the displacing influence of the pronator quadratus and supinator longus, as may be convenient. If desirable, the dorsal splint may be terminated at or near the line, and the forepart of the fingers left unconfined.

The splints may be made of wood, hard rubber, tinned sheet-iron, zinc, or other suitable materials. Tin and zinc, though not always the best material, are, however, the most convenient, because of the ease with which they may be bent to fit the arm and hand of the patient, and the readiness with which they may be procured in case of emergency.

Having thus described my improvement so that others skilled in the art may manufacture and use it, what I claim is:

1. A dorsal splint for treating fracture of the forearm or wrist, having a suitable brachial surface retroflexed directly at the wrist without substantial depression at that point, to extend over the metacarpal dorsal surface of the hand, at a retroflexed angle from the forearm, substantially as described.

2. A palmar splint for treating fracture of the forearm or wrist, having a suitable brachial surface retroflexed beyond the flexors of the thumb and bent downward at or near the middle joint of the digital phalanges, substantially as described.

3. The combination of a dorsal splint for treating fractures of the forearm or wrist, having a suitable brachial surface retroflexed directly at the wrist without substantial depression at that point to extend over the metacarpal dorsal surface of the hand at a retroflexed angle from the forearm, with a palmar splint made the substantial counterpart of the said dorsal splint, and provided with a retroflexed support for the palmar surface of the hand, substantially as described.

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**Official List of Changes of Stations and Duties of Medical Officers of the United States Marine Hospital Service, for the week ended May 23, 1885.**

Mead, F. W., passed assistant surgeon. Detailed as member of Board for physical examination of candidates for appointment as cadets in the Revenue Marine Service, May 18, 1885.

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**Personal.**

—Dr. T. Hewson Bradford will be the resident physician at the Beach House, Sea Girt, N. J., for the season of 1885.

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**OBITUARY NOTICES.**

WILLIAM E. ROGERS, M. D.

At his residence in Memphis, Tenn., on May 21, Dr. Wm. E. Rogers, in the 59th year of his age. Dr. Rogers was a graduate of Jefferson Medical College, and was not only a prominent physician, but also a surgeon of acknowledged skill and eminence. He was the founder of the "Memphis Hospital Medical College," of which he was the Professor of Surgery and Dean of the Faculty at the time of his death.

J. M. B., M. D.

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**QUERIES AND REPLIES.**

Dr. J. G. Cunningham, of Kittanning, Pa., asks our readers if they can give the name and address of the author of the following formula for gastric vertigo, which he clipped from some medical journal some years since:

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| ℞. | Argenti oxidi, | gr. ½ |
| | Pulv. capsici, | gr. ¼ |
| | Extract colocynth co., | gr. ½ |
| | Pulv. camphoræ, | gr. ½ |

M. Ft. pil. No. 1.

S.—One pill after each meal.

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—In the *Microscope*, May, 1885, L. G. Doane says: "Upon a slip of glass, put a drop of liquid auric chloride or argentic nitrate, with half a grain of metallic zinc in the auric chloride, and copper in the silver. A growth of exquisite gold and silver ferns will grow beneath the eye."